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MA ECONOMICS

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(MONETARY ECONOMICS)

(English Medium)

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MONETARY ECONOMICS

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BLOCK I: INTRODUCTION TO MONETARY ECONOMICS

UNIT-1: MONEY

1.1.An Introduction Barter system and its defects

DEFECTS OF BARTER

The barter system is the most inconvenient method of exchange. It involves loss of much time and effort on the part of people in trying to exchange goods and services.As a method of exchange, the barter system has the following difficulties and disadvantages.

Lack of Double Coincidence of Wants.

The functioning of the barter system requires a double coincidence of wants on the part of those who wabt to exchangegoods and services. It is necessary for a person who wishes to trade his good or services to find some other person who is not only willing to buy his good or service,but also possesses that good which which the former wants.For example,suppose a person possesses a horse and wants to exchange it for a cow but also wants a horse.

The existence of such a double coincidence of wants is a remote probability. For , it is a very laborious and time- consuming process to find out person who want each other’s goods. Often the horse –owner would have to carry through a number of intermediary transactions. He might have to trade his horse for some sheep, sheep for some goats and goats for the cow he wants. To be successful, the barter system involves multilateral transactions which are not matched exactly; no trade is possible under barter. Thus a barter system is time consuming and is a great hindrance to the development and expansion of trade.

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Lack of a Common Measure of Value.

Another difficulty under the barter system relates to the lack of a common unit in which the value of goods and services should be measured. Even if the two persons who want each other's two goods meet by coincidence, the problem arises as to the proportion in which the two goods should be exchanged .There being no common measure of value the rate of exchange will be arbitrarily fixed accordingly to intensity of demand, the for each other's goods .Consequently, one party is at a disadvantage in terms of trade between two goods.

Moreover, under a barter system the value of each good is required to be stated in as many quantities as there are types and qualities of other goods and services.The exchange rate formula givenby Prof.Culbertson is n (n-1)/2.For example, if there are 100 different types of goods in a barter economy, then there would be 4950 exchange rates for it to function smoothly., i.e. 100(100-1)/2=100X99/2 or 9900/2= 4950. This makes accounting an impossibility because a balance sheet would consist of a long physical inventarory of the various types and qualities of goods owned and owed.Similarly,it is difficult to draw and interpret the profit and loss accounts of even a small shop. That is why the existence of the barter system is associated with a small primitive society confined to a local market.

Indivisibility of Certain Goods.

The barter system is based on the exchange of goods with other goods. It is difficult to fix exchange rates for certain goods which are indivisible. Such individisible goods pose a real problem under barter.A person may desire a horse and the other a sheep and both may be willing to trade .The former may demand more than four sheep for a horse but the other is not prepared to give five sheep and thus there is no exchange . If asheep had been divisible, a payment of four and a half sheep for a horse might have been mutually satisfactory.Similarly, if the man with the horse wants only two sheep then how will he exchange his horse for two sheep. As it is not possible to divide his horse, no trade will be possible between the two person .Thus indivisibility of certain goods makes the barter system inoperative.

Difficulty in Storing Value .

Under the barter system it is difficult to store value .Anyone wanting to save real capital over a long period would be faced with the difficulty that during the intervening period the stored commodity may become obsolete or deteriorate in value. As people trade in cattle, grains, and other such perishable commodities.It is very expensive and often difficult to store and to prevent their deterioration and loss over the long period.

Difficulty in Making Deferred Payments.

In a barter economy, it is difficult to make payments in the future. As payments are made in goods and services,debt contracts are not possible due to disagreements on the part of the two parties on the following grounds.: " 1. It would often invite controvency as to the quality of the goods or services to be repaid. 2. The two parties would often be unable to agree on the specific commodity to be used for repayment. 3. Both parties would run the risk that the commodity to be repaid would increase or decrease seriouslyin value over the duration of the contract. For example wheat might rise markedly in value in terms of other commodities, to the debtor's regret, or

decrese markedly in value , to the creditor's regret, Thus it is not possible to make just payments involving future contracts under the barter system.

Lack of Specialization

Another difficulty of the barter system is that it is associated with a production system where each person is a jack-of-all trades .In other words a high degree of specialization is difficult to achieve under the barter system .Specialization and interdependence in production is only possible in an expanded market system based on the money economy. Thus no economic progress is possible in a barter economy due to lack of specialization .

The above mentioned difficulties of barter have led to the evolution of money.

1.2.Evolution of Money

The word "money" is derived from the Latin word "Moneta " which was the surname of the Roman Godess of Juno in whose temple at Rome , money was coined. The orgin of money is lost in antiquity. Even the primitive man had some sort of money.The type of money in every age depended on the nature of its livelihood. In hunting society , the skins of wild animals were used as money. The poastoral society used livestock, wheras the agricultural society used grains and foodstuffs as money.The Greeks used coins as money

Stages in the Evolution of money

The evolution of money has passed through the following five stages depending upon the progress of human civilization at different times and places.

1. Commodity Money.

Various types of commodities have been types of commodities have been used as money from the beginning of human civilization . Stones, spears ,skins, bows and arrows and axes were used as money in the hunting society . The pastoral society used cattle as money . The agricultural society used grains as money. The Romans used cattel and salt as money at different times. The Mongolians used squirrel skin as money. Presious stones ,tobacco , tea , shells, fishhooks, and many other commodities served as money depending upon time, place and economic standard of the society.

The use of commodities as money had the following details.

(1) All commodities were not uniform in quality,such as cattle,grains,etc. Thus lack of standardization made pricing difficult.

(2) Difficult to store and prevent loss of value in the case of perishable commodities.

(3) Supplies of such commodities were uncertain.

(4) They lacked in portability and hence were difficult to transfer from one place to another.

(5) There was the problem of indivisibility in the case of such commodities as cattle.

2.Metallic Money.

With the spread of civilization and trade relation by land and sea ,metallic money took the place of commodity money. Many nations started using silver, gold, copper,tin,etc, as money.

But the metal was an inconvenient thing to accept ,weigh ,divide and assess in quality. Accordingly, metal was made into coins of predetermined

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weight. This innovation is attributed to king Midas of Lydia in the eight century B.C. But gold coins were in use in India many centuries earlier than in Lydia. Thus coins came to be accepted as convenient method of exchange.

But some ingenious persons started debasing the coins by clipping a thin slice off the edge of coins. This led to the hoarding of full-bodied coins with the result that debases coins were found in circulation .This led to the minting of coins with a rough edge.

As a price of gold began to rise, gold coins were melted in order to earn more by selling them as metal. This led governments to mix copper or silver in gold coins so that their intrinsic value might be more than their face value. As gold became dearer and scarce ,silver coins were used ,first in their pure form and later on mixed with alloy or some other metal.

But metallic money had the following defects:

(1) It was not possible to change its supply according to the requirements of the nation both for internal and external use.
(2) Being heavy,it was not possible to carry large sums of money in the form of coins from one place to another by merchants.
(3) It was unsafe and inconvenient to carry precious metals for trade purposes over long distances.
(4) Metallic money was very expensive because the use of coins led to their debasement and their minting and exchange at the mint cost a lot to the government.

3.Paper Money.

The development of paper money started with goldsmiths who kept strong safes to store their gold. As goldsmiths were thought to be honest merchants, people started keeping their gold with them for safe custody. In return , the goldsmiths gave the depositors to return the gold on demand. These receipts of the goldsmiths were given to the sellers of commodities by the buyers. Thus receipts of the goldsmiths were a substitute for money. Such paper money was backed by gold and was convertible on demand into gold. This ultimately led to the development of bank notes.

The bank notes are issued by the central bank of the country. As the demand for gold and silver increased with the rise in their prices, the convertibility of bank notes into gold and silver was gradually givel up during the beginning and after the First World War in all the countries of the world. Since then the bank money has ceased to be representative money and is simply fiat money which is inconvertible and is accepted as money because it is backed by law.

4.Credit Money.

Another stage in the evolution of money in the modern world is the use of the cheque as money. The cheque is like a bank note in that it performs the same function .It is a means of transferring money or obligations from one person to another person.But a cheque is different from a bank note.A cheque is made for a specific sum,and it expires with a single transaction .But a cheque is not a money.It is simply a written order to transfer money.However, large transactions are made through cheques these days and bank notes are used only for small transactions.

4.Near Money.

The final stage in the evolution of money has been the use of bills of exchange,treasury bills,bonds,debentures,savings certificates,etc.They are known as “near money”.They are close substitutes for money and are liquid

assets.Thus in the final stage of its evolution money has become intangible.Its ownership is now transferable simply by book entry.

Thus the orgin of money has been through various stages: from commodity money to metallic money , and to paper money , and from credit money to near money.

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1.3.Meaning:

There has been lot of controvensy and confusion over the meaning and nature of money. As pointed out by Scitovsky, “Money is a difficult concept to define,partly becauseit fulfills not one but three functions,each of them providing a criterion of moneyness…..those of a unit of account,a medium of exchange ,and a store of value,” Though Scitovsky points toward the difficulty of defining money due to moneyness,yet he gives a wide definition of money.Professor Coulborn defines money as “the means of valuation and payment:as both the unit of account and the generally acceptable meadium of exchange. “Coulborn’s definition is very wide.He includes in it the ‘concrete’ money such as gold ,cheques ,coins,currency notes ,bank draft,etc. and also abstract money which “is the vehicle of our thoughts of value , price and worth.” Such wide definitions have led Sir John Hicks to say that “money is definedby its functions;anythingis money which is used as money;, ‘Money is what money does.’ These are the functional definitions of money because they define money in terms of the functions it performs.

1.4.Definitions:

Some economists define money in legal terms saying that “anything which the state declares as money is money.”Such money possesses general acceptability and has the legal power to discharge debts .But people may not accept legal money by refusing to sell goods and services against the payment of legal tender money. On the other hand ,they may accept some other things as money which are not legally defined as money.In discharge of debts which may circulate freely.Such things are cheques and notes issued by commercial banks.Thus besides legality, there are other determinants which go to make a thing to serve as money.

1.5.Functions, Advantages and Disadvantages

FUNCTIONS OF MONEY

Money performs a number of primary,secondary ,contingent and other functions which not only remove the difficulties of barter but also oils the whees of trade and industry in the present day world. We discuss these functions one by one.

1.Primary Functions

The two primary functions of money are to act as a exchange and as a unit of value.

(i)Money as a Medium of Exchange.

This is the primary function of money because it is out of this function that its other functions developed .By serving as a medium of exchange , money removes the need for double coincidence of wants and the

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inconveniences and difficulties associated with barter .The introduction of money as a medium of exchange decomposes the single transaction of barter into separate transactions of sale and purchase thereby eliminating the double coincidence of wants. This function of money also separates the transactions in time and place because the sellers and buyers of a commodity are not required to perform the transactions at the same time and place. This is because the seller of a commodity buys some money and money ,in turn, buys the commodity over time and place.

When money acts as a medium of exchange ,it means that it is generally acceptable.It,therefore ,affords the freedom of choice.With money ,we can buy an assorted bundle of goods and services.At the same time , we can purchase the best and also bargain in the market .Thus money gives us a good deal of economic independence and also perfects the market mechanism by increasing competition and widening the market.

As a medium of exchange ,money acts as an intermediary.It facilitates exchange.It helps production indirectly through speialisation and division of labour which ,in turn ,increase efficiency and output.According to Prof.Walters, money ,therefore ,serves as a factor of production, enabling output to increase and diversify

In the last analysis money facilitates trade.When acting as the intermediary, it helps one good or service to be traded indirectly for others.

(ii)Money as Unit of Value.

The second primary function is to act as a unit of value.Under barter one would have to resort to some standard of measurement ,such as a length of string or a piece of wood.Since one would have to use a standard to measure the length or height of any object,it is only sensible that one particular standard should be accepted as the standard.Money is the standard should be accepted as the standard.Money is the standard for measuring for measuring length.The monetary unit measures and expresses the value goods and services .In fact,the monetary unit expresses the value of each or services in terms of price.Money is the common dominator which determines the rate of exchange between goods and services which are priced in terms of the monetary unit.There can be no pricing process without a measure of value.

The use of money as a standard of value elimates the necessity of quoting the price of apples in terms of oranges,the price of oranges in terms of nuts ,and so on .Unlike barter,the prices of such commodities are expressed in terms of so many units of dollars ,rupees,francs,pounds,etc.,depending on the nature of the monetary unit in a country.As a matter of fact,Measuring the values of goods and services in the monetary unit facilitates the problem of measuring the exchange values of goods in the market.When values are expressed in terms of money,the number of prices are redused from n(n-1) in barter economy to (n-1) in monetary economy.

Money as a unit of value also facilities accounting. “Assets of all kinds,liabilities of all kinds,and expenses of all kinds can be stated in terms of common monetary units to be added or substrated,”

Further ,money as a unit of account helps in calculation s of economic importance such as the estimation of the costs,and revenues of business firms,the relative costs and profitability of various public enterprises and projects under planned economy,and the gross national product.as pointed out by Culbertion , “Prices quoted in terms of money become the focus of people’s behavior. Their calculation

,plans,expentations,and contracts focus on money prices."

2. Secondary Function

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Money performs three secondary functions: as a standard of deferred payments ,as a store of value, and as a transfer of value .They are discussed below.

(i) Money as a Standard of Deferred Payments

The third function of money is that it acts as a standard of deferred or postponed payments.All debts are taken in money.

It was easy under barter to take loans in goats or grainsbut difficult to make repayments in such perishable articles in the future.Money has simplified both the taking and repayment of loans because the unit of account is durable.Money links the present values with those of the future.It simplifies credit transactions.It makes possible contracts for the supply of goods in the future for an agreed payment of money.It simplifies borrowing by consumers on hire-purchase and from house –building and cooperative societies.Money facilitates borrowing by firms and businessmen from banks and other non bank financial institutions.The buying and selling of shares ,debentures and securities is made possible by money.By acting as a standard of deferred payments money helps in capital formation both by the government and business enterprises.In fine this function of money develops financial and capital markets and helps in the growth of the economy.

But there is the danger of changes in the value of money over time which harms or benefits the creditors and debtors.If the value of money increases over time,the creditors gain and debtors lose.On the other hand, a fall in the value of money over time brings losses to creditors and windfalls to debtors .To overcome this difficulty ,some of the countries have fixed debt contracts in terms of a price index which measures changes in the value of money .Such a contract overtime guarantees the future payment of debt by compensating the loser by the same amount of purchasing power when the contract was entered into.

(ii) Money as a Store of Value.

Another important function of money is that it acts as a store of value. "The good chosen as money is always something which can be kept for long periods without deterioration or wastage.It is a form in which wealth can be kept intact from one year to the next . Money is a bridge from the present to the future.It is therefore essential that the money commodity should always be one which can be easily and safely stores." Money as a store of value is meant to meet unforeseen emergencies and to pay debts.Newlyn calls this the asset function of money. "Money is not ,of course ,the only store of value .This function can be served by any valuable asset.One can store value for the future by holding short-term promissory notes,bonds,mortgages,preferred stocks ,household furniture,houses,land,or any other kind of valuable goods.The principle advantages of these other assets as a store of value are that they,unlike money,ordinarily yield an income in the form of interest ,profits, rent or usefulness…..,and they sometimes rise in value in terms of money.

On the otherhand ,they have certain disadvantages as a store of value ,among which are the following:

(1) They sometimes involve storage cost;

(2) they may depreciate in terms of money;

(3)they are "illiquid" in varying degrees, for they are not generally acceptable as money and ir may be possible to convert them into money

quickly only by suffering a loss of value.

Keynes placed much emphasis on this function of money.According to him to hold money is to keep it as a reserve of liquid assets which can be converted into real goods.It is a matter of comparative indifference whether wealth is in money,money claims,or goods.In fact ,money and money claims have certain advantages of security ,convenience and adaptability over real goods. But the store of value function of money also suffers from changes in the value of money.This introduces considerable hazard in using money or assets as a store of value.

(iii) Money as a transfer of Value.

Since money is a generally acceptable means of payment and acts as a store of value,it keeps on transferring values from person to person and place to place .A person who holds money in cash or assets can transfer that to any other person.Moreover ,he can sell his assets at Delhi and purchase fresh assets at Bangalore .Thus money facilitates transfer of value between persons and places.

3.Contingent Functions

Money also performs certain contingent or incidental functions, according to Prof. David Kinley.They are

(i) Money as the Most Liquid of all Liquid Assets.

Money is the most liquid of all liquid assets in which wealth is held.Individuals and firms may hold wealth in infinitely varied forms. "They may ,for example ,choose between holding wealth in currency ,demand deposits ,time deposits,savings ,bonds ,Treasury Bills ,short-term government securities ,debentures ,preference shares ,ordinary shares,stocks of consumer goods,and productive equipment. "All these are liquid forms of wealth which can be converted into money,and vice –versa.

(ii) Basis of the Credit System.

Money is the basis of credit system.Business transactions are either in case or on credit .Credit economises the use of money.But money is at the back of all credit.A commercial bank cannot create credit without having sufficient money in reverse .The credit instruments drawn by businessmen have always a cash guarantee supported by their bankers.

(iii) Equaliser of Marginal Utilites and Producers.

Money acts as an equalizer of marginal utilites for comsumer .The main aim of a consumer is to maximize his satisfaction by spending a given sum of money on various goods which he wants he wants to purchase .Since prices of goods indicate their marginal utilites and are expressed in money , money helps in equalizing the marginal utilites of various goods.This happens when the ratios of the marginal utilites and prices of various goods are equal.Similarly ,money helps in equalizing the marginal productivities of various factors.The main ai of the producer is to maximize his profits .For this ,he equalizes the marginal productivity of each factor with its price.The price of each factor is nothing but the money he receives for his work.

(iv) Measurements of National Income.

It was not possible to measure the national income under the barter system .Money helps in measuring national income.This is done when the various goods and services produced in a country are assessed in money terms.

(v) Distribution of National Income.

Money also helps in the distribution of national income.Rewards of factors of production in the form of wages ,rent,interest and profit are

determined and paid in terms of money.

4.Others Functions

Money also performs such functions which affect the decisions of consumers and governments.

(i) Helpful in making deceisions.

Money is a means of store of value and the consumer meets his daily requirements on the basis of money held by him.If the consumer has a scooter and in the near future he needs a car ,he can buy a car by selling his scoter and money accumulated by him.In this way ,money helps in taking decisions.

(ii) Money as a Basis of Adjustment.

To carry on trade in a proper manner ,the adjustment between money market and capital market is done through money .Similarly ,adjustments in forgein exchange are also made through money .Further ,international payments of various types are also adjusted and made through money.

It is on the basis of these functions that money guarantees the solvency of the payer and provides options to the holder of money to use it any way, he likes.

1.6.Methods of Note Issue

Methods of Note Issue

Notes are issued in almost all the countries according to the "Banking Principal", but the reserve varies from country to country. According to the reserve, several countries methods of note issued have been evolved which are as under;

- Fixed Fiduciary System
- Maximum Fiduciary System
- Proportional Reserve System
- The Minimum Reserve System

1. **Fixed Fiduciary System**

Under this method of note issue, central bank of the country is allowed to issue currency notes of a specified amount without presenting gold and silver to cover it. Once this limit is reached, additional amount of notes can be issued by hundred percent backed by gold. The advantages claimed for this method is that it gives elasticity in the money supply. It also grant maximum care due to the excess issuance of notes of the "Fiduciary Limit" except they are sheltered by hundred percent of gold. The possibility of inflation is effectively checked. However, this system is objected on the ground that judiciary limit is open to change by amendment in the Act and is raised will lose the confidence of the people.

2. **Maximum Fiduciary System**

According to this method of note issue, the fiduciary system's limit is fixed above the normal requirements of the country. Beyond the maximum no note is issued without legal sanction. This system is defective in the sense that, if

the limit is too low, the currency system becomes inelastic and if the limit is too high, there is danger of over issue of notes.

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3. **Proportional Reserve System**

Under this method of note issue, the central bank is mandatory by law to maintain a permanent percentage from 25% to 40% adjacent to issuance of notes. It is often called percentage system. The remainder of the notes is to be covered by trade bills and government securities. This system is easily operated and it gives needed elasticity to the currency note system. But the system is uneconomic as huge amount of gold is kept idle as reserve. Moreover, the value of money is not stable, but this system is elastic up to a certain limit.

4. **Minimum Reserve System**

Under this method of note issue, the reserve limit is permanently fixed and the volume of the notes has no connection with the amount of the reserve. To meet the ever- increasing demand for currency, government can issue notes up to any amount against the reserve but it is faced with the danger of the inflation.

1.7.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i)Define Money?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i)What are the methods of note issue?

1.8.Answer to check your progress Questions.

1. Money is a difficult concept to define,partly becauseit fulfills not one but three functions,each of them providing a criterion of moneyness…..those of a unit of account,a medium of exchange ,and a store of value,

2. Methods of note issu

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- Fixed Fiduciary System
- Maximum Fiduciary System
- Proportional Reserve System
- The Minimum Reserve System

1.9.Summary

In this unit you have learnt about the monetary definition and evolution of money. This knowledge would make you understand what is monet and how it can be practised at economy. The concept such as advantage and disadvantages would have made you to distinguish these activities from the methods of note issue and you might have learnt about the money context.

1.10.Key words

Barter system, Reserve System, Money

1.11.Self Assessment Questions and Exercises.

Short Answer Questions

1. Define Money?

2. What are the methods of note issue?

Long answer Questions.

1.Explain the defects of the barter system?

2.What are the Functions, Advantages and Disadvantages of Money?

1.12.Further Readings.

Jhingan, M.L. (2012), **"Monetary Economics",** Vrindha Publications (P) Ltd, New Delhi.

Notes

UNIT-2: ROLE OF MONEY - I:

2.1.Capitalist and Socialist and Mixed Economies

The Role of Money in a Capitalist Economy

A capitalist economy is one in which each individual in his capacity as a consumer producer and resource owner is engaged in economic activity with a large measure of economic freedom. Individual economic actions are governed by the instruction of private property, profit motive, freedom of enterprise and consumers sovereignty.

All factors of production are privately owned and managed by individuals who are at liberty to dispose them of within the prevalent laws. Individuals have the freedom to choose any occupation, and to buy and sell any number of goods and services.

Such an economy is essentially a money economy where money plays an important role in its functioning. Consumers and producers receive income in money. Consumers receive money income in the form of wages, rents, interest and dividends by selling the services of the factors of production which they own in the form of labour, land, and capital respectively. They are free to spend their money income on whichever goods and services they wish to buy. They may partly spend their money income and partly save in the form of money.

Big and small firms, in turn, buy the services of the factors of production for producing commodities. These services are purchased in money terms. The entire productive process in a capitalist economy is determined by the profit motive. Profit is the difference between outlay and receipt. All these profit, outlay and receipt are calculated in terms of money.

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In fact, there is a circular flow of money in such an economy. Alliums demand the services of the factors of production to produce consumer goods. All factors of production are paid for their services in money, who buy consumer goods with it. Thus money flows back to firms which again make monetary payments to consumers for the services rendered by them in the further production of goods of varied types.

Money and the Price Mechanism in a Capitalist Economy:

The most significant role of money lies in the functioning of the price mechanism. The price system functions through prices of goods and services. Prices determine the production of innumerable goods and services. They organise production and help in the distribution of goods and services. Since prices are expressed in money, the price mechanism under capitalism cannot function without money.

In a capitalist economy where means of production are owned privately and production is also carried out by private enterprise, money performs the important function of solving the central problems of such an economy. This is done through the price mechanism. The price mechanism operates automatically without any direction and control by the government.

The central problems of a capitalist economy as to what, how much, and how and for whom to produce are solved through the price mechanism. We discuss them as under.

This problem of what, how much and how to produce are solved by the price mechanism on the basis of the profit motive. Profit is the difference between expenditure and receipt of a firm. The size of profit depends upon prices of commodities. The larger the difference between price and costs, the higher is the profit. Again the higher the prices, the greater are the efforts of the producers to produce the different types of commodities in different quantities. On the other hand, prices depend upon consumers' choices of the various commodities. It is also the consumer's choices which determine what to produce, how much to produce, how to produce and for what type of consumers.

It is, it fact, competition between consumers and producers which equalises the demand and supply of both goods and services in a capitalist economy. There being sufficient flexibility under capitalism, prices adjust

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themselves to changes in demand, in production techniques, and in the supply of factors of production.

Changes imprecise, in turn, bring adjustments in production, factor demand and consumer incomes. Money is, therefore, the basis of the price mechanism under capitalism. It is a pivot around which the entire capitalist economy revolves. Since such an economy functions without any government interference, money plays a crucial role in maximising the wants of consumers and profits of producers.

For the Consumer:

Under capitalism, the consumer is the king who buys only those commodities which give him the maximum satisfaction with a given money income. This he does by equalising the marginal utilities of different goods he wishes to buy. When the price of each commodity expressed in money equals its marginal utility, the consumer gets maximum satisfaction.

Thus money enables a consumer to make a rational choice out of the various commodities he wants to buy with his given money income. Figure 62.1 illustrates this argument. Suppose only two commodities are produced in a capitalist economy. They are capital goods and consumer goods taken on the vertical and horizontal axes respectively.

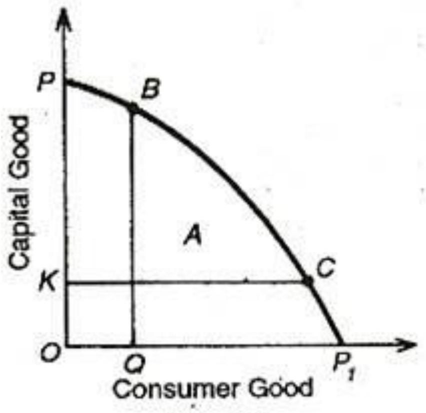


FIG. 62.1

The production possibility curve PP_1 represents the area of choice for the consumer. It is for the producer to decide whether to produce capital goods or consumer goods depending on consumer's rational choice. The consumer will choose either combination B or C which gives him the maximum satisfaction with a given money income. At combination A he will be buying lesser quantities of the two goods and will beat a lower level of satisfaction than at any point on the PP_1 curve.

For the Producer:

Money is equally important for the producer who buys and sells inputs and outputs in money. His aim being to maximise profits, he calculates the marginal cost and marginal revenue in money. Profits appear when marginal revenue exceeds marginal cost, and they lead to further production.

When marginal cost exceeds marginal revenue, losses appear and production is curtailed. But these situations do not continue for long. The price mechanism restores the equilibrium between marginal revenue and marginal cost at prices which do not need further adjustments. Thus producers earn normal profit which they receive in the form of money.

Basis of Capitalist Production:

In fact, money is the very basis of the capitalist production. By facilitating the purchase of inputs, and by increasing specialisation and division of labour, money helps in the growth of research in the agricultural, industrial and tertiary sectors of a capitalist economy. Since all these sectors are mutually dependent and are based on mutual exchanges through money, capitalist production tends to increase. In other words, money helps in capitalist production through a circular flow of goods and services from these sectors.

Basis of Credit:

The entire capitalist system of production is based on credit. Credit instruments are a form of money which is issued by banks to facilitate trade, commerce, agriculture, industry, transport, etc. under capitalism. It is on the basis of credit instruments that banks advance loans to the different sectors of a capitalist economy. The amount of credit is determined by the interest rate which expresses the price of loan-able funds, and loans find their expression in money.

Means of Capital Formation:

The very basis of capitalism is the capital and money is the most liquid form of capital. The growth of a capitalist economy depends upon the capital accumulation. And capital accumulation is a process whereby people save out of their money incomes deposit them with banks and other financial institutions which, in turn, lend them to agriculturists, industrialists, transporters and other businessmen for investment in capital assets. The different stages in the process of capital formation under capitalism—receiving income, saving and investing—are all performed in money terms.

Link between the Present and the Future:

Money establishes a link between the present and future through the freedom of enterprise and freedom of consumption under capitalism. The freedom of consumption the part of the consumer leads to freedom to save a part of his money income. Saving leads to the production of capital goods via investment and capital goods contribute to the growth of the economy.

Thus it is through money that consumers save in the present and saving helps in production in the future. Similarly, freedom of enterprise under capitalism helps the businessman and the trader to make payments in the future for bargains made in the present. This is possible through money when the goods are stored n the present and sola in the future. It is in this way that money helps to establish a link between the present and the future.

Leads to Business Cycles:

Besides these apparent merits of money in a capitalist economy, it has one serious defect in that an excess of money leads to inflation and its

shortage leads to deflation. These changes in the quantity of money result in cyclical fluctuations with their attendant consequences on the economy. In fact, an excess of money supply creates more demand which, in turn, leads to overproduction, to glut of commodities in the market and finally to depression and mass unemployment.

There is thus wastage of resources and loss in productivity when there are business cycles in a capitalist economy. But Schumpeter regarded business cycles as the cost of economic development, a permanent feature of the dynamic path of a capitalist economy which takes it to a higher level of development every time a cycle takes place.

In fine money plays a crucial role in the functioning of a capitalist economy.

The Role of Money in a Socialist Economy

In a socialist economy, the central authority owns and controls the means of production and distribution. All mines, farms, factories, financial institutions, distributing agencies (such as internal and external trade, shops, stores, etc.) means of transport and communications, etc., are owned, controlled and regulated by government departments and state corporations. Therefore, the pricing process in a socialist economy does not operate freely but works under the control and regulation of the central planning authority.

Marx believed that money had no role to play in a socialist economy because it led to the exportation of labour at the hands of capitalists. He, therefore, advocated the habilitation of money and exchange by bartering goods measured in terms of labour value.

In keeping with the Marx an ideas, the Bolshevik Government in Russia eliminated money as a medium of exchange in 1917. Money payments for the use of various services and goods were abolished. "But barter transactions proved to be too clumsy. Although some communist writers had prematurely hailed the dying out of money, it became obvious that the socialist economy needed a stable currency nearly as much as a private enterprise economy."

Accordingly, market exchanges, money and monetary incentives were reintroduced in the New Economic Policy (1921-27) in the USSR. Since then the Soviet economy has been using money in production, distribution and exchange such that money acts as a medium of exchange, a store of value, and a unit of account.

We have given above a brief description of the role of money in the Soviet economy which is the finest variant of a socialist economy in action.

Theoretically, the role of money in a socialist economy is different from that in a capitalist economy.

Money and Price Mechanism in a Socialist Economy:

The price mechanism has little relevance in a socialist economy because it is regarded as a distinguishing feature of a free market economy.

In a socialist economy the various elements of the price mechanism— costs, profits and prices are all planned and calculated by the planning authority in accordance with the objectives and targets of the plan. Thus rational economic calculation or allocation of resources is not possible in a socialist economy. Let us find out how a socialist society solves the central problems of an economy, what, how and for whom to produce.

In a socialist state, it is the central planning authority that performs the functions of the market. Since all the material means of production are owned, controlled and directed by the government, the decisions about what to produce are taken within the framework of a central plan.

The decisions, as to the nature of goods to be produced and their quantities, depend upon the objectives, targets and priorities laid down by the central planning authority. The prices of the various commodities are also fixed by this authority. Prices reflect the social preferences of the common man. Consumer's choice is limited only to the commodities that the planners decide to produce and offer.

The problem of how to produce is also decided by the central planning authority. "It establishes the rules for combining factors of production and choosing the scale of output of a plant, for determining the output of an industry, for the allocation of resources, and for the parametric use of prices in accounting." The central planning authority lays down two rules for the guidance of plant managers.

One, that each manager should combine productive goods and services in such a manner that the average cost of producing a given output is the minimum. Two, that each manager should choose that scale of output which equalises marginal cost to price. Since all resources in the economy are owned and regulated by the government, the raw materials, machines and other inputs are also sold at prices which are equal to their marginal cost of production.

If the price of a commodity happens to be above its average cost, the plant managers will earn profits, and if it is below the average cost of production, they will incur losses. In the former case, the industry would expand and in the latter case it would cut down production, and ultimately a position of equilibrium will be reached by the process of trial and error.

The process of trial and error would, however, proceed on the basis of historically given prices which would necessitate relatively small adjustments in prices from time to time. Thus "all decisions of the managers of production and of the productive resources in public ownership and also all decisions of individuals as consumers and as suppliers of labour are made on the basis of these prices.

As a result of these decisions the quantity demanded and supplied of each commodity is determined. If the quantity demanded of a commodity is not equal to the quantity supplied, the price of that commodity has to be changed. It has to be raised if demand exceeds supply and lowered if the reverse is the case. Thus the central planning board fixes a new set of prices

Notes

which serves as a basis for new decisions, and which results in a new set of quantities demanded and supplied.”

The problem of for whom to produce is also solved by the state in a socialist economy. The central planning authority takes these decisions at the time of deciding what and how much to produce in accordance with the overall objectives of the plan. In making this decision, social preferences are given weightage. In other words, higher weightage is given to the production of those goods and services which are needed by the majority of the people over luxury items.

They are based on the minimum needs of the people, and are sold at fixed prices through government stores. Since goods are produced in anticipation of demand, an increase in demand brings about shortages and this leads to rationing.

Thus in a socialist society the problem of income distribution is automatically solved because all resources are owned by the state and their rewards are also fixed and paid by the state. Economic surpluses are deliberately created and utilised for capital accumulation and growth.

Capital Accumulation:

Besides, capital accumulation is possible through money. It is money that provides liquidity and mobility required for capital accumulation. In a socialist economy the sources of investment funds are basically the same as under a capitalist economy. The turnover tax, planned profits of public enterprises, amortisation quotas and taxation of agricultural produce in kind or in low procurement prices are all expressed in money and help in capital accumulation.

Foreign Trade:

Moreover, socialist economies do not enter into foreign trade on bilateral trade relations based on commodity transactions. Rather, being members of the World Bank and the IMF, they make payments in monetary terms in their international trade relations.

Circular Flow of Money:

There is also circular flow of money in a socialist economy. The producing units receive funds for investment from the state budget as grants or as loans from the state bank to purchase the necessary inputs and for making payments to workers.

The workers spend their wages on consumer goods. The producing units receive revenues from sales, which, in turn, go into tax payments and profit earnings and as repayments of loans to the state bank. These funds again flow from the state budget and the state bank to the producing units. Thus money helps in the circular flow of goods and services in a socialist economy.

To conclude, the role of money in a socialist economy may be less important as compared to a capitalist economy due to state regulation and control. Nevertheless, it helps in fixing prices, wages, incomes and profits. It

guides a socialist economy in determining the allocation of its resources equitably, in capital accumulation and flow of resources within and outside the economy.

Role of Money in a Mixed Economy

Mixed economy, which has been regarded as a golden mean between capitalism and socialism, is a compromise between these two opposite economic systems.

The rational for such a compromise is to integrate the good features of capitalism and socialism, i.e., to take advantage of the market forces while keeping its bad effects under check.

In a mixed economy, private and public sectors co-exist. The private sector operates on capitalist lines, guided by the market mechanism and the principle of maximum profit.

But its activities are subject to government controls and regulation to ensure that this sector grows in a manner that would be beneficial to the economy.

In this way, the economy is not left entirely to the market forces, but is regulated by fiscal, monetary and direct controls to achieve the national goals.

In a mixed economy of the type prevailing in developed countries, like England, the public sector plays a regulatory role of compensatory spending and pump priming in order to remove the imperfections of the economy and to achieve its stability.

On the other hand, in a mixed economy of a developing nation, like India, the public sector has to play a dynamic role to achieve the objective of planned economic development.

Money as a Mobilising agent

Apart from performing the conventional functions, i.e., as a medium of exchange, as a measure of value, as a standard of deferred payment and as a store of value, money, through the expansion of monetary economy and the development of money market, plays an active and developmental role in a developing and mixed economy.

Money acts as a great mobilising agent in these economies in a number of ways by increasing resources, generating new resources and channelising resources into productive uses.

1. Mobilisation of Saving:

In the developing economies, saving and investment habits of the people are very poor. Expansion of money market promotes liquidity and safety of financial assets and thus encourages saving and investment.

Notes

2. Allocation of Resources:

Money market allocates savings into productive investment channels and thus helps in achieving an equlibrium between the demand for and supply of loanable funds. In this way, it leads to rational allocation of resources.

3. Resource Mobility:

Expansion of money economy increases the mobility of financial resources by enabling the transfer of funds from one sector to another. Such flow of funds is essential for the growth of the economy and commerce.

4. Increase in Investible Profits:

Expansion of money, through its inflationary effect, redistributes income and wealth in favour of the entrepreneurial classes who have high propensity to save.

With this redistribution, the profits and savings in the economy increase. The increase in savings is used for investment purpose.

5. Resource Generation through Deficit Financing:

Deficit financing or inflation tax (i.e., covering the budget deficit through printing new money) can provide adequate fundi to the government for financing development programmes in underdeveloped countries.

In an underdeveloped country, where there is little scope for additional taxation due to low income of the people and public borrowing is limited due to low levels of saving, the government can resort to deficit financing to cover the deficit in the budget.

6. Mobilisation of Human Resources:

Monetisation of the economy by facilitating system of payments encourages the mobilisation of human resources.

Money, through its inflationary role, increases the aggregate demand and thus permits fuller utilisation of manpower. This leads to quicker achievement of the objective of full employment.

7. Implementation of Monetary Policy:

A well-developed money market is a precondition for the effective and successful implementation of the monetary policy of the central bank aiming at mobilisation and channelisation of essential resources for economic development.

8. Role in Private Sector:

Money, through market mechanism, influences the decisions regarding production and resource allocation in the private sector of the developing mixed economies because these decisions are solely guided by profit motive.

9. Monetisation of the Economy:

An important feature of a less- developed economy is the prevalence of a vast non-monetised sector. As the economy develops, more and more

money and monetary institutions are needed for the monetisation of the economy.

2.2.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) Define capitalist economy

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of tl unit.

2.3.Answer to check your progress Questions.

1. A capitalist economy is one in which each individual in his capacity as a consumer producer and resource owner is engaged in economic activity with a large measure of economic freedom. Individual economic actions are governed by the instruction of private property, profit motive, freedom of enterprise and consumers sovereignty.

2. In a socialist economy, the central authority owns and controls the means of production and distribution. All mines, farms, factories, financial institutions, distributing agencies (such as internal and external trade, shops, stores, etc.) means of transport and communications, etc., are owned, controlled and regulated by government departments and state corporations

2.4.Summary

In this unit you have learnt about the meaning and features of economic sytsems. This knowledge would make you understand what is capitalism, socialism and how it can be worked at a monetary economy. The concept such as capitalism, socialism would have made you to distinguish these activities from the methods of note issue and you might have learnt about the meaing and its features in the money context.

2.5.Key words

capitalism, socialism, mixed economics

Notes

2.6.Self Assessment Questions and Exercises.

Short Answer Questions

1. Define capitalist economy?
2. What is socialist economy?

Long answer Questions.

1. Explain Capitalist and Socialist Economy.
2. Explain Mixed Economies

2.7.Further Readings

Chandler, L.V (1977), "**Economics of Money and Banking**", S.Chand Ltd, New Delhi.

UNIT-3: ROLE OF MONEY - II:

Notes

3.1.The Role of Money in Classical and Keynesian Models

The Classical View on Money:

In the classical system, money is neutral in its effects on the economy. It plays no role in the determination of employment, income and output. Rather, they are determined by labour, capital stock, state of technology, availability of natural resources, saving habits of the people, and so on. In the classical system, the main function of money is to act as a medium of exchange.

It is to determine the general level of prices at which goods and services will be exchanged. The quantity theory of money states that the price level is a function of the supply of money. Algebraically, MV=PT, where, M, V, P and T are the supply of money, velocity of money, price level, and the volume of transactions (or total output) respectively.

The equation tells that the total money supply, MV, equals the total value of output, PT, in the economy. Assuming V and T to be constant, a change in M causes a proportionate change in P. Thus money is neutral. It is simply a 'veil' whose main function is to determine the general price level at which goods and services exchange.

The notion of neutrality of money in the classical system is explained in terms of Fig. 1. Where we start with an initial full employment equilibrium position with $N_{o,}$ Q_{o}â€™ W/P_{o}â€™ M_{o}â€™ P_o, and W_{o}â€™ as illustrated in Panels (A), (B), (C) and (D) of Fig. 1. The initial equilibrium is disturbed when the quantity of money is increased from M_0 to M_1. This leads to a rise in effective demand from MV_0 to MV_1, and shown in Panel (C).

Notes

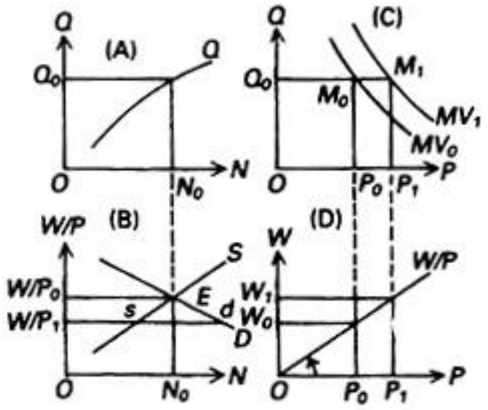


FIG. 1

This raises commodity prices in proportion to the rise in M, since real output O is fixed. In other words, the rise in the price level is exactly proportional to the rise in the quantity of money, i.e. $P_0 P_1$=$M_0 M_1$. With increase in the price level, the money wage rate will rise as rapidly as prices to (Panel D) in order to keep the real wage rate W/P_0 unchanged (Panel B). But with increase in the price level, the real wage rate tends to decrease from W/P_p to W/P_1, as shown in Panel B of the figure.

This increases the demand for labour by more than the supply of labour which is shown by the distance sd in Panel B. The competitive bidding for labour will ultimately lead to rise in the real wage rate to W/P_0 whereby the labour market equilibrium is restored at point E. Thus the result of an increase in money is to raise money wages and prices in equal proportion, leaving output, employment and the real wage rate unaffected. It is in this sense that money is a veil or neutral in the classical system.

The Keynesian View: Monetary Equilibrium:

The Keynesian theory assigns a key role to money. It contends that a change in the money supply can permanently change such real variables as the interest rate, the levels of employment, output and income. Keynes believed in the existence of unemployment equilibrium in the economy.

The existence of unemployment equilibrium implies that an increase in money supply can bring about permanent increases in the level of output. The ultimate influence of money supply on the price level depends upon its influence on aggregate demand and the elasticity of the supply of aggregate output.

The Keynesian chain of causation between changes in the quantity of money and in prices is an indirect one through the rate of interest. So when the quantity of money is increased, its first impact is on the rate of interest which tends to fall. Given the marginal efficiency of capital, a fall in the rate of interest will increase the volume of investment.

The increased investment will raise effective demand through the multiplier effect thereby increasing income, output and employment. Since the supply curve of factors of production is perfectly elastic in a situation of unemployment, wage and non-wage factors are available at constant rate of remuneration.

There being constant returns to scale, prices do not rise with the increase in output so long as there is any unemployment. Under the circumstances, output and employment will increase in the same proportion as effective demand, and the effective demand will increase in the same proportion as the quantity of money. But "once full employment is reached, output ceases to respond at all to changes in the supply of money and so in effective demand.

The elasticity of supply of output in response to changes in the supply, which was infinite as long as there was unemployment falls to zero. The entire effect of changes in the supply of money is exerted on prices, which rise in exact proportion with the increase in effective demand". Thus, so long as there is unemployment, output will change in the same proportion as the quantity of money, and there will be no change in prices; and when there is full employment, prices will change in the same proportion as the quantity of money.

Therefore, Keynes stresses the point that with increase in the quantity of money, prices rise only when the level of full employment is reached, and not before this.

This is illustrated in Fig. 2, Panels (A) and (B) where OTC is the output curve relating to the quantity of money and PRC is the price curve relating to the quantity of money. Panel A of the figure shows that as the quantity of money increases from O to M, the level of output also rises along the OT portion of the OTC curve. As the quantity of money reaches OM level, full employment output OQ_F is being produced. But after point T the output curve becomes vertical because any further increase in the quantity of money cannot raise output and the full employment level OQ_F

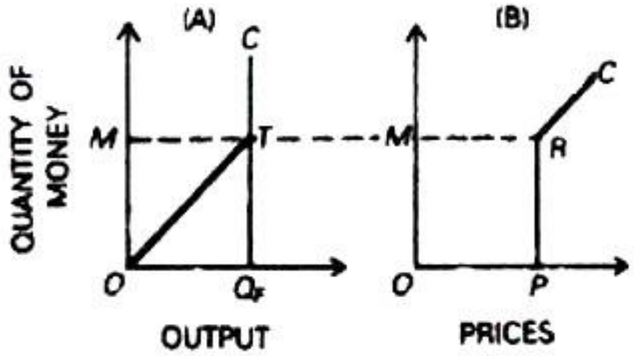


FIG. 2

Panel B of the figure shows the relationship between quantity of money and prices. So long as there is unemployment, prices remain constant whatever increase in the quantity of money. Prices start rising only after the full employment level is reached, In the figure, the price level op remains constant at the OM quantity of money corresponding to the full employment level of output OQ_F . But an increase in the quantity of money above OM raises prices in the same proportion as the quantity of money. This is shown by the RC portion of the price curve PRC.

Monetary Equilibrium:

So far as the rate of interest is concerned, it is a monetary phenomenon in the Keynesian theory. It is determined by the demand for and

supply of money. The theory is thus characterised as the monetary theory of interest. The supply of money is considered to be fixed in the short run by monetary authorities. The demand for money, also called the liquidity preference, is the desire to hold cash.

There are three motives on the part of the people to hold cash:
(a) Transaction demand for money,

(b) Precautionary demand for money, and

(c) Speculative demand for money.

Money held for transactions and precautionary motives is a function of the level of income. $L_T = f(Y)$. It varies directly with the level of income and inversely with the interest rate.
According to Keynes, it is expectations about changes in bond prices or in the market rate of interest that determine the speculative demand for money, $Ls = f(r)$. The speculative demand for money is a decreasing function of the rate of interest.

The higher the rate of interest, the lower the speculative demand for money, and vice-versa. But at a very low interest rate, the speculative demand for money becomes perfectly elastic. This is the "liquidity trap" portion of the demand for money curve. In this range, people prefer to keep money in cash rather than invest in bonds because purchasing bonds will lead to loss.

Thus the total demand for money is a function of both income and the interest rate:

$L_{T+}L_s = f(Y) + f(r)$
Or $L = f(Y) + f(r)$

Or $L = f(Y, r)$

where L represents the total demand for money.

The necessary conditions for monetary equilibrium in the Keynesian theory are the equality of the money supply (M) and the demand for money (L) which determines the interest rate,

$M = L\ (=L_T + L_s)$

This is illustrated in Fig. 3 (A) and (B). The transactions (plus precautionary) demand for money is given by the curve L_T at OY, and OY_2 levels in Panel (A) of the figure. At OY_1 income level, it is given by OM_1 and at OY_2 level of income by OM_1. In Panel (B), the curve L represents the total demand for money consisting of transactions, precautionary and speculative demand, $L_T + L_s$.

Notes

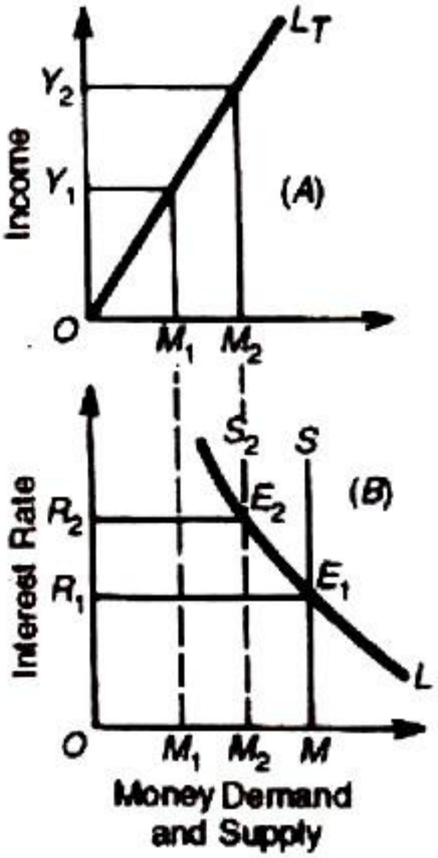


FIG. 3

On the horizontal axis, if OM is the total demand for money, and OM_2 is transactions (plus precautionary) demand for money, then M_2M is the speculative demand for money:

$OM = OM_2 + M_2M$

In other words, if OM_2 is subtracted from OM, we get the speculative demand for money:

$OM - OM_2 = M_2M$.

If the money supply is given as MS and it equals the demand for money represented by the curve L at point E_1 it determines the interest rate OR_1Thus the necessary conditions for monetary equilibrium at E_1 are the combination of money income OY_2 and money interest rate $OR_1$the demand for money, OM_2+M_2M, is equal to the supply of money, M_s.

If there is any deviation from the equilibrium position, an adjustment will take place via a change in the interest rate and level of income. Suppose the rate of interest rises to OR_2. This will reduce investment, output, employment and income. Assume that the income falls to OY_1, as shown in Panel (A) of the figure. In Panel (B) of the figure with rise in the interest rate to OR_2, the total demand for money falls to OM_2 which now consists of OM_1 of transactions (plus precautionary) demand and M_1M_2 of speculative demand.

If the monetary authority reduces the money supply to M_2S_2 equal to the fall in money demand, the new monetary equilibrium will be set at point E_2 where the L curve intersects it. The opposite will be the case if the rate of interest falls below OR_1 and continues to fall, the economy may be in the "liquidity trap".

Notes

In the Keynesian monetary equilibrium, when the economy is in the 'liquidity trap,' there cannot be a further fall in the rate of interest even if the money supply is increased by the monetary authority. This implies that there will not be any effect on investment and income. In this situation, money is neutral and monetary policy has no effect on the economy. Given an interest-inelastic investment function, monetary policy will be ineffective.

Money is also neutral and plays no role in the Keynesian system in the full employment situation when an increase in the quantity of money brings about a proportionate increase in the price level, and employment, output and income remain unchanged. But money influences the macro variables of the economy in an important way between these two extreme cases of the liquidity trap and full employment in the Keynesian system.

To conclude, money plays a significant causal role in the Keynesian theory. "The degree of money's importance depends upon its ability to alter money interest rates and upon the degree to which expenditure categories (consumption, investment, government outlays, and so forth) are sensitive to changes in the interest rate. To the extent that a given change in the money supply can induce large changes in the interest rate and that expenditures are highly sensitive to those changes, money matters very much in the Keynesian system."

3.2.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is Monetary Equilibrium?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) **What are** three motives on the part of the people to hold cash

3.3.Answer to check your progress Questions.

1. So far as the rate of interest is concerned, it is a monetary phenomenon in the Keynesian theory. It is determined by the demand for and

supply of money. The theory is thus characterised as the monetary theory of interest. The supply of money is considered to be fixed in the short run by monetary authorities. The demand for money, also called the liquidity preference, is the desire to hold cash.

2. (a) Transaction demand for money,

(b) Precautionary demand for money, and

(c) Speculative demand for money.

3.4.Summary

In this unit, you have learnt about the meaning of keynesion model. This knowledge would make you understand what is classical model of money and how it can be worked at a money level. The concept such as classical and keynesion would have made you to distinguish these activities from money activities and you might have learnt about the meaning and its roles in the economy.

3.5.Key words

Demand, Equilibrium, liquidity

3.6.Self Assessment Questions and Exercises.

Short Answer Questions

1. What is Monetary Equilibrium?

2. What are three motives on the part of the people to hold cash ?

Long answer Questions.

1.what is classical modules of money?
2.Difference between classical and Keynesian modules of economy?

3.7.Further Readings

Kurihara, KK(1950), "**Monetary Theory and Public Policy**", Norton Digitised, 2007.

Notes

BLOCK II: THEORIES OF MONETARY ECONOMICS

UNIT-4: DEMAND FOR MONEY - I:

4.1.The Classical Approach

The Demand for Money: The Classical and the Keynesian Approach Towards Money

What explains changes in the demand for money? There are two views on this issue. The first is the "scale" view which is related to the impact of the income or wealth level upon the demand for money. The demand for money is directly related to the income level. The higher the income level, the greater will be the demand for money.

The second is the "substitution" view which is related to relative attractiveness of assets that can be substituted for money. According to this view, when alternative assets like bonds become unattractive due to fall in interest rates, people prefer to keep their assets in cash, and the demand for money increases, and vice versa.

The scale and substitution view combined together have been used to explain the nature of the demand for money which has been split into the transactions demand, the precautionary demand and the speculative demand. There are three approaches to the demand for money: the classical, the Keynesian, and the post-Keynesian. We discuss these approaches below.

The Classical Approach:

The classical economists did not explicitly formulate demand for money theory but their views are inherent in the quantity theory of money. They emphasized the transactions demand for money in terms of the velocity of circulation of money. This is because money acts as a medium of exchange and facilitates the exchange of goods and services. In Fisher's "Equation of Exchange".

Notes

$$MV=PT$$

Where M is the total quantity of money, V is its velocity of circulation, P is the price level, and T is the total amount of goods and services exchanged for money.

The right hand side of this equation PT represents the demand for money which, in fact, "depends upon the value of the transactions to be undertaken in the economy, and is equal to a constant fraction of those transactions." MV represents the supply of money which is given and in equilibrium equals the demand for money. Thus the equation becomes

$$Md = PT$$

This transactions demand for money, in turn, is determined by the level of full employment income. This is because the classicists believed in Say's Law whereby supply created its own demand, assuming the full employment level of income. Thus the demand for money in Fisher's approach is a constant proportion of the level of transactions, which in turn, bears a constant relationship to the level of national income. Further, the demand for money is linked to the volume of trade going on in an economy at any time.

Thus its underlying assumption is that people hold money to buy goods.

But people also hold money for other reasons, such as to earn interest and to provide against unforeseen events. It is therefore, not possible to say that V will remain constant when M is changed. The most important thing about money in Fisher's theory is that it is transferable. But it does not explain fully why people hold money. It does not clarify whether to include as money such items as time deposits or savings deposits that are not immediately available to pay debts without first being converted into currency.

It was the Cambridge cash balance approach which raised a further question: Why do people actually want to hold their assets in the form of money? With larger incomes, people want to make larger volumes of transactions and that larger cash balances will, therefore, be demanded.

The Cambridge demand equation for money is

$$Md=kPY$$

Notes

where Md is the demand for money which must equal the supply to money (Md=Ms) in equilibrium in the economy, k is the fraction of the real money income (PY) which people wish to hold in cash and demand deposits or the ratio of money stock to income, P is the price level, and Y is the aggregate real income. This equation tells us that "other things being equal, the demand for money in normal terms would be proportional to the nominal level of income for each individual, and hence for the aggregate economy as well."

Its Critical Evaluation:

This approach includes time and saving deposits and other convertible funds in the demand for money. It also stresses the importance of factors that make money more or less useful, such as the costs of holding it, uncertainty about the future and so on. But it says little about the nature of the relationship that one expects to prevail between its variables, and it does not say too much about which ones might be important.

One of its major criticisms arises from the neglect of store of value function of money. The classicists emphasized only the medium of exchange function of money which simply acted as a go-between to facilitate buying and selling. For them, money performed a neutral role in the economy. It was barren and would not multiply, if stored in the form of wealth.

This was an erroneous view because money performed the "asset" function when it is transformed into other forms of assets like bills, equities, debentures, real assets (houses, cars, TVs, and so on), etc. Thus the neglect of the asset function of money was the major weakness of classical approach to the demand for money which Keynes remedied.

4.2. The Keynesian

The Keynesian Approach: Liquidity Preference:

Keynes in his General Theory used a new term "liquidity preference" for the demand for money. Keynes suggested three motives which led to the demand for money in an economy: (1) the transactions demand, (2) the precautionary demand, and (3) the speculative demand.

The Transactions Demand for Money:

The transactions demand for money arises from the medium of exchange function of money in making regular payments for goods and services. According to Keynes, it relates to "the need of cash for the current transactions of personal and business exchange" It is further divided into income and business motives. The income motive is meant "to bridge the interval between the receipt of income and its disbursement."

Similarly, the business motive is meant "to bridge the interval between the time of incurring business costs and that of the receipt of the sale proceeds." If the time between the incurring of expenditure and receipt of income is small, less cash will be held by the people for current transactions, and vice versa. There will, however, be changes in the transactions demand for money depending upon the expectations of income recipients and businessmen. They depend upon the level of income, the

interest rate, the business turnover, the normal period between the receipt and disbursement of income, etc.

Given these factors, the transactions demand for money is a direct proportional and positive function of the level of income, and is expressed as

$$L_1 = kY$$

Where L_1 is the transactions demand for money, k is the proportion of income which is kept for transactions purposes, and Y is the income.

This equation is illustrated in Figure 70.1 where the line kY represents a linear and proportional relation between transactions demand and the level of income. Assuming k= 1/4 and income Rs 1000 crores, the demand for transactions balances would be Rs 250 crores, at point A. With the increase in income to Rs 1200 crores, the transactions demand would be Rs 300 crores at point B on the curve kY.

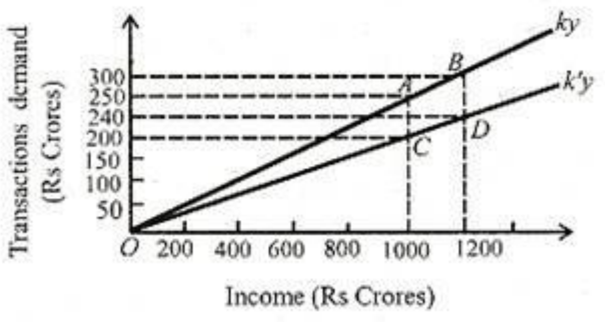


Fig. 70.1

If the transactions demand falls due to a change in the institutional and structural conditions of the economy, the value of κ is reduced to say, 1/5, and the new transactions demand curve is kY. It shows that for income of Rs 1000 and 1200 crores, transactions balances would Rs 200 and 240 crores at points C and D respectively in the figure. "Thus we conclude that the chief determinant of changes in the actual amount of the transactions balances held is changes in income. Changes in the transactions balances are the result of movements along a line like kY rather than changes in the slope of the line. In the equation, changes in transactions balances are the result of changes in Y rather than changes in k."

Interest Rate and Transactions Demand:

Regarding the rate of interest as the determinant of the transactions demand for money Keynes made the L_T function interest inelastic. But the pointed out that the "demand for money in the active circulation is also the some extent a function of the rate of interest, since a higher rate of interest may lead to a more economical use of active balances." "However, he did not stress the role of the rate of interest in this part of his analysis, and many of his popularizes ignored it altogether." In recent years, two post-Keynesian economists William J. Baumol and James Tobin have shown that the rate of interest is an important determinant of transactions demand for money.

They have also pointed out the relationship, between transactions demand for money and income is not linear and proportional. Rather, changes in income lead to proportionately smaller changes in transactions demand.

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Transactions balances are held because income received once a month is not spent on the same day. In fact, an individual spreads his expenditure evenly over the month. Thus a portion of money meant for transactions purposes can be spent on short-term interest-yielding securities. It is possible to "put funds to work for a matter of days, weeks, or months in interest-bearing securities such as U.S. Treasury bills or commercial paper and other short-term money market instruments.

The problem here is that there is a cost involved in buying and selling. One must weigh the financial cost and inconvenience of frequent entry to and exit from the market for securities against the apparent advantage of holding interest-bearing securities in place of idle transactions balances.

Among other things, the cost per purchase and sale, the rate of interest, and the frequency of purchases and sales determine the profitability of switching from ideal transactions balances to earning assets. Nonetheless, with the cost per purchase and sale given, there is clearly some rate of interest at which it becomes profitable to switch what otherwise would be transactions balances into interest-bearing securities, even if the period for which these funds may be spared from transactions needs is measured only in weeks. The higher the interest rate, the larger will be the fraction of any given amount of transactions balances that can be profitably diverted into securities."

The structure of cash and short-term bond holdings is shown in Figure 70.2 (A), (B) and (C). Suppose an individual receives Rs 1200 as income on the first of every month and spends it evenly over the month. The month has four weeks. His saving is zero.

Accordingly, his transactions demand for money in each week is Rs 300. So he has Rs 900 idle money in the first week, Rs 600 in the second week, and Rs 300 in the third week. He will, therefore, convert this idle money into interest bearing bonds, as illustrated in Panel (B) and (C) of Figure 70.2. He keeps and spends Rs 300 during the first week (shown in Panel B), and invests Rs 900 in interest-bearing bonds (shown in Panel C). On the first day of the second week he sells bonds worth Rs. 300 to cover cash transactions of the second week and his bond holdings are reduced to Rs 600.

Similarly, he will sell bonds worth Rs 300 in the beginning of the third and keep the remaining bonds amounting to Rs 300 which he will sell on the first day of the fourth week to meet his expenses for the last week of the month. The amount of cash held for transactions purposes by the individual during each week is shown in saw-tooth pattern in Panel (B), and the bond holdings in each week are shown in blocks in Panel (C) of Figure 70.2.

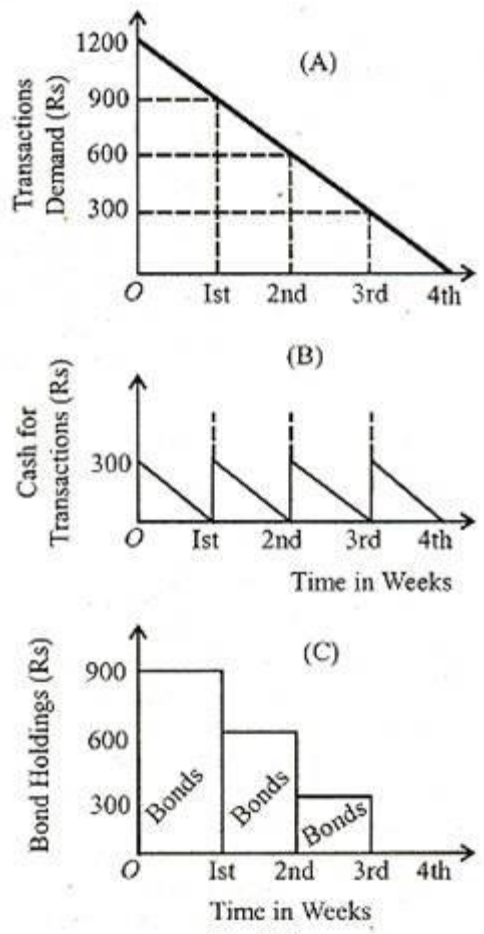


Fig. 70.2

The modern view is that the transactions demand for money is a function of both income and interest rates which can be expressed as $L_1 = f(Y, r)$.

This relationship between income and interest rate and the transactions demand for money for the economy as a whole is illustrated in Figure 3. We saw above that $L_T = kY$. If y=Rs 1200 crores and k= 1/4, then L_T = Rs 300 crores.

This is shown as Y_1 curve in Figure 70.3. If the income level rises to Rs 1600 crores, the transactions demand also increases to Rs 400 crores, given k = 1/4. Consequently, the transactions demand curve shifts to Y_2. The transactions demand curves Y_1, and Y_2 are interest- inelastic so long as the rate of interest does not rise above r_8 per cent.

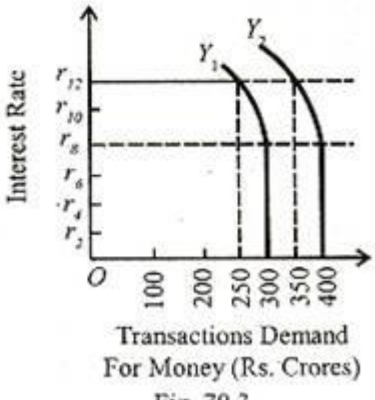


Fig. 70.3

As the rate of interest starts rising above r_8, the transactions demand for money becomes interest elastic. It indicates that "given the cost of

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switching into and out of securities, an interest rate above 8 per cent is sufficiently high to attract some amount of transaction balances into securities." The backward slope of the K, curve shows that at still higher rates, the transaction demand for money declines.

Thus when the rate of interest rises to r_{12}, the transactions demand declines to Rs 250 crores with an income level of Rs 1200 crores. Similarly, when the national income is Rs 1600 crores the transactions demand would decline to Rs 350 crores at r_{12} interest rate. Thus the transactions demand for money varies directly with the level of income and inversely with the rate of interest.

The Precautionary Demand for Money:

The Precautionary motive relates to "the desire to provide for contingencies requiring sudden expenditures and for unforeseen opportunities of advantageous purchases." Both individuals and businessmen keep cash in reserve to meet unexpected needs. Individuals hold some cash to provide for illness, accidents, unemployment and other unforeseen contingencies.

Similarly, businessmen keep cash in reserve to tide over unfavourable conditions or to gain from unexpected deals. Therefore, "money held under the precautionary motive is rather like water kept in reserve in a water tank." The precautionary demand for money depends upon the level of income, and business activity, opportunities for unexpected profitable deals, availability of cash, the cost of holding liquid assets in bank reserves, etc.

Keynes held that the precautionary demand for money, like transactions demand, was a function of the level of income. But the post-Keynesian economists believe that like transactions demand, it is inversely related to high interest rates. The transactions and precautionary demand for money will be unstable, particularly if the economy is not at full employment level and transactions are, therefore, less than the maximum, and are liable to fluctuate up or down.

Since precautionary demand, like transactions demand is a function of income and interest rates, the demand for money for these two purposes is expressed in the single equation $LT=f(Y, r)$[9]. Thus the precautionary demand for money can also be explained diagrammatically in terms of Figures 2 and 3.

The Speculative Demand for Money:

The speculative (or asset or liquidity preference) demand for money is for securing profit from knowing better than the market what the future will bring forth". Individuals and businessmen having funds, after keeping enough for transactions and precautionary purposes, like to make a speculative gain by investing in bonds. Money held for speculative purposes is a liquid store of value which can be invested at an opportune moment in interest-bearing bonds or securities.

Bond prices and the rate of interest are inversely related to each other. Low bond prices are indicative of high interest rates, and high bond prices reflect low interest rates. A bond carries a fixed rate of interest. For instance, if a bond of the value of Rs 100 carries 4 per cent interest and the market rate of interest rises to 8 per cent, the value of this bond falls to Rs 50

in the market. If the market rate of interest falls to 2 per cent, the value of the bond will rise to Rs 200 in the market.

This can be worked out with the help of the equation

$$V = R/r$$

Where V is the current market value of a bond, R is the annual return on the bond, and r is the rate of return currently earned or the market rate of interest. So a bond worth Rs 100 (V) and carrying a 4 per cent rate of interest (r), gets an annual return (R) of Rs 4, that is,

V=Rs 4/0.04=Rs 100. When the market rate of interest rises to 8 per cent, then V=Rs 4/0.08=Rs50; when it fall to 2 per cent, then V=Rs 4/0.02=Rs 200.

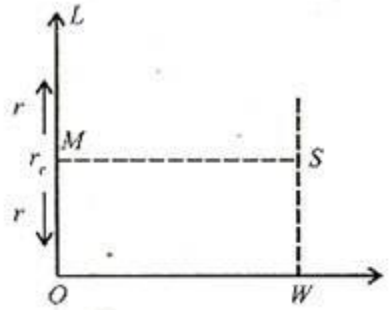
Thus individuals and businessmen can gain by buying bonds worth Rs 100 each at the market price of Rs 50 each when the rate of interest is high (8 per cent), and sell them again when they are dearer (Rs 200 each when the rate of interest falls (to 2 per cent).

According to Keynes, it is expectations about changes in bond prices or in the current market rate of interest that determine the speculative demand for money. In explaining the speculative demand for money, Keynes had a normal or critical rate of interest (r_c) in mind. If the current rate of interest (r) is above the "critical" rate of interest, businessmen expect it to fall and bond price to rise. They will, therefore, buy bonds to sell them in future when their prices rise in order to gain thereby. At such times, the speculative demand for money would fall. Conversely, if the current rate of interest happens to be below the critical rate, businessmen expect it to rise and bond prices to fall. They will, therefore, sell bonds in the present if they have any, and the speculative demand for money would increase.

Thus when $r > r_0$, an investor holds all his liquid assets in bonds, and when $r < r_0$ his entire holdings go into money. But when $r = r_0$, he becomes indifferent to hold bonds or money.

Thus relationship between an individual's demand for money and the rate of interest is shown in Figure 70.4 where the horizontal axis shows the individual's demand for money for speculative purposes and the current and critical interest rates on the vertical axis. The figure shows that when r is greater than r_0, the asset holder puts all his cash balances in bonds and his demand for money is zero.

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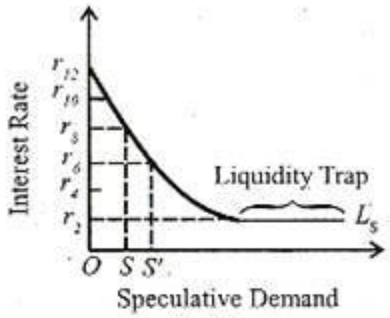


Speculative Demand
for Money

Fig. 70.4

This is illustrated by the LM portion of the vertical axis. When r falls below r_0, the individual expects more capital losses on bonds as against the interest yield. He, therefore, converts his entire holdings into money, as shown by OW in the figure. This relationship between an individual asset holder's demand for money and the current rate of interest gives the discontinuous step demand for money curve LMSW.

For the economy as a whole the individual demand curve can be aggregated on this presumption that individual asset-holders differ in their critical rates r_0. It is smooth curve which slopes downward from left to right, as shown in Figure 70.5.



Speculative Demand
for Money

Fig. 70.5

Thus the speculative demand for money is a decreasing function of the rate of interest. The higher the rate of interest, the lower the speculative demand for money and the lower the rate of interest, the higher the speculative demand for money. It can be expressed algebraically as Ls = f (r), where Ls is the speculative demand for money and r is the rate of interest.

Geometrically, it is shows in Figure 70.5. The figure shows that at a very high rate of interest r_{J2}, the speculative demand for money is zero and businessmen invest their cash holdings in bonds because they believe that the interest rate cannot rise further. As the rate of interest falls to say, r_8 the speculative demand for money is OS. With a further fall in the interest rate to r_6, it rises to OS'. Thus the shape of the Ls curve shows that as the interest rate rises, the speculative demand for money declines; and with the fall in the interest rate, it increases. Thus the Keynesian speculative demand for money function is highly volatile, depending upon the behaviour of interest rates.

Liquidity Trap:

Keynes visualised conditions in which the speculative demand for money would be highly or even totally elastic so that changes in the quantity of money would be fully absorbed into speculative balances. This is the famous Keynesian liquidity trap. In this case, changes in the quantity of money have no effects at all on prices or income. According to Keynes, this is likely to happen when the market interest rate is very low so that yields on bond, equities and other securities will also be low.

Notes

At a very low rate of interest, such as r_2, the Ls curve becomes perfectly elastic and the speculative demand for money is infinitely elastic. This portion of the Ls curve is known as the liquidity trap. At such a low rate, people prefer to keep money in cash rather than invest in bonds because purchasing bonds will mean a definite loss. People will not buy bonds so long as the interest rate remain at the low level and they will be waiting for the rate of interest to return to the "normal" level and bond prices to fall.

According to Keynes, as the rate of interest approaches zero, the risk of loss in holding bonds becomes greater. "When the price of bonds has been bid up so high that the rate of interest is, say, only 2 per cent or less, a very small decline in the price of bonds will wipe out the yield entirely and a slightly further decline would result in loss of the part of the principal." Thus the lower the interest rate, the smaller the earnings from bonds. Therefore, the greater the demand for cash holdings. Consequently, the Ls curve will become perfectly elastic.

Further, according to Keynes, "a long-term rate of interest of 2 per cent leaves more to fear than to hope, and offers, at the same time, a running yield which is only sufficient to offset a very small measure of fear." This makes the Ls curve "virtually absolute in the sense that almost everybody prefers cash to holding a debt which yields so low a rate of interest."

Prof. Modigliani believes that an infinitely elastic Ls curve is possible in a period of great uncertainty when price reductions are anticipated and the tendency to invest in bonds decreases, or if there prevails "a real scarcity of investment outlets that are profitable at rates of interest higher than the institutional minimum."

The phenomenon of liquidity trap possesses certain important implications.

First, the monetary authority cannot influence the rate of interest even by following a cheap money policy. An increase in the quantity of money cannot lead to a further decline in the rate of interest in a liquidity-trap situation. Second, the rate of interest cannot fall to zero.

Third, the policy of a general wage cut cannot be efficacious in the face of a perfectly elastic liquidity preference curve, such as Ls in Figure 70.5. No doubt, a policy of general wage cut would lower wages and prices, and thus release money from transactions to speculative purpose, the rate of interest would remain unaffected because people would hold money due to the prevalent uncertainty in the money market. Last, if new money is created, it instantly goes into speculative balances and is put into bank vaults or cash

boxes instead of being invested. Thus there is no effect on income. Income can change without any change in the quantity of money. Thus monetary changes have a weak effect on economic activity under conditions of absolute liquidity preference.

Notes

The Total Demand for Money:

According to Keynes, money held for transactions and precautionary purposes is primarily a function of the level of income, L_T=f (F), and the speculative demand for money is a function of the rate of interest, Ls = f (r). Thus the total demand for money is a function of both income and the interest rate:

$L_T + L_S = f(Y) + f(r)$

or $L = f(Y) + f(r)$

or $L=f(Y, r)$

Where L represents the total demand for money.

Thus the total demand for money can be derived by the lateral summation of the demand function for transactions and precautionary purposes and the demand function for speculative purposes, as illustrated in Figure 70.6 (A), (B) and (C). Panel (A) of the Figure shows OT, the transactions and precautionary demand for money at Y level of income and different rates of interest. Panel (B) shows the speculative demand for money at various rates of interest. It is an inverse function of the rate of interest.

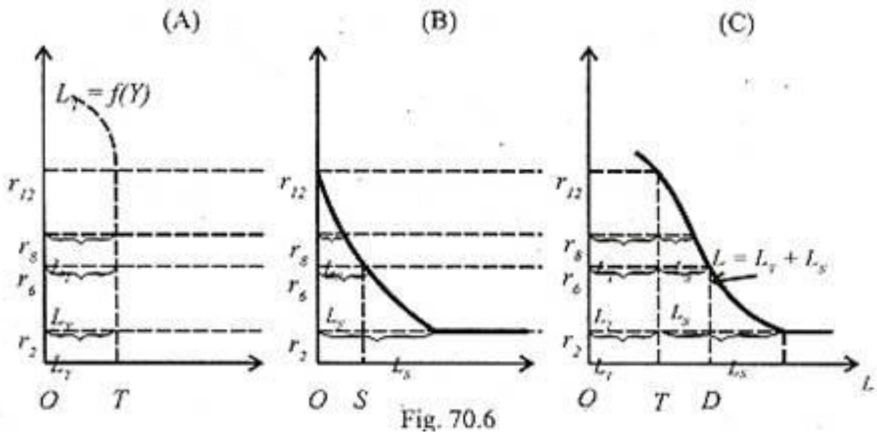


Fig. 70.6

For instance, at r_6 rate of interest it is OS and as the rate of interest falls to r the Ls curve becomes perfectly elastic. Panel (C) shows the total demand curve for money L which is a lateral summation of LT and Ls curves: $L=L_T+L_S$. For example, at r_b rate of interest, the total demand for money is OD which is the sum of transactions and precautionary demand OT plus the speculative demand TD, OD=OT+TD. At r_2 interest rate, the total demand for money curve also becomes perfectly elastic, showing the position of liquidity trap.

4.3.Post Keynesian Developments

1. Core Elements

Post-Keynesian economics (PKE) is an economic paradigm that

stems from the work of economists such as John Maynard Keynes (1883-1946), Michal Kalecki (1899-1970), Roy Harrod (1900-1978), Joan Robinson (1903-1983), Nicholas Kaldor (1908-1986), and many others. It is defined by the view that the **principle of effective demand** as developed by J. M. Keynes in the *General Theory* (1936) and M. Kalecki (1933) holds in the short, as well as in the long run. That is, that economic activity in a capitalist monetary economy is demand-driven and that there are no built-in mechanisms that guarantee full employment and full utilisation of capacities.

Post-Keynesians are united in their rejection of the different versions of neoclassical economics as inappropriate for the analysis of a monetary, capitalist economy. They are also unanimous in their joint endeavour of building an **alternative economic theory** that is more suitable for analysing the inherent features of modern capitalist economies, such as unemployment, (financial) crises, business cycles, depressions, technological change, and uneven development.

They have an understanding of the economy as being structured by **institutions** such as firms, labour unions, wage and credit contracts, government regulation and so forth. These institutions determine economic behaviour to a large extent, which is why PKE gives a certain priority to macro- and mesoeconomic analyses.

On the microeconomic level, PKE stresses that the future is fundamentally **uncertain.** It follows that individuals cannot act perfectly rationally as understood by mainstream economists. They rather make decisions based on rules of thumb, as they can deal better with incomplete and complex information. Rules of thumb are also very much influenced by social conventions and norms, which can lead to stability (e.g. nominal wage contracts stabilising the price level), as well as to instability (e.g. due to herd behaviour in financial markets). Fundamental uncertainty also shapes behaviour of firms, which operate in imperfectly competitive markets rendering them price makers and quantity takers.

PKE studies a wide array of economic fields ranging from short-run macroeconomics (unemployment, economic output and inflation), long-run macroeconomics (growth and distribution), monetary economics, finance and the international monetary system to microeconomic approaches to the theory of the firm, theory of consumption, exchange rate theory, financialisation, and much more. Correspondingly, PKE provides a rich set of policy proposals which often differ considerably from standard recipes offered by mainstream economics. Two examples are the emphasis on fiscal policy as the main tool to fight economic recessions in the short-run and the view that central banks should maintain low interest rates and regulate the banking system rather than narrowly focusing on fighting inflation. Another case in point would be the endorsement of labour market institutions that foster collective wage bargaining and establish a nominal wage anchor that no one can undercut. This compels firms to compete by quality and productivity without causing deflation by lowering wages.

Although by name they are very similar, post-Keynesianism is quite different from Old Keynesianism as well as New Keynesian economics. Post-Keynesians regard the New Keynesian approach as mainly neoclassical with some alterations that lead to market imperfections, but which do not improve their analysis of the real world. Nevertheless, New Keynesian

economics not post-Keynesian economics, is usually what students learn to be modern Keynesianism.

2. Terms, Analysis, Conception of Economy

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PKE seeks to analyse **capitalist** economies that are characterised by certain distinctive features. Capitalist economies are **monetary production economies** in which money (credit) is advanced by banks or other financial institutions to firms to invest in physical capital and labour to produce goods and services. Those are sold to obtain a profit and to repay the debt plus interest that has been incurred to finance investment. This **monetary circuit** establishes not only a **circular flow of income** between the main sectors of the economy, but also links economic units like households, firms or governments, to each other over time through their **asset and liability structure**. The capitalist macro-economy thus forms a system that has to be analysed in a *systemic* way — what happens in one sector of the economy has effects on other sectors, too.

Post-Keynesians conceive capitalist economies as highly productive, but **unstable** and **conflictive** systems. Economic activity is determined by **effective demand**, which is typically insufficient to generate full employment and full utilisation of capacity. **Fluctuations** in effective demand are mostly due to changes in investment expenditures, which are in turn strongly affected by **expectations.** Expectations of economic agents are influenced by social conventions and rules of thumb due to **fundamental uncertainty** about the future. In times of generally optimistic expectations, investment demand may be buoyant and set in motion a phase of strong credit growth, capital accumulation and income generation.

New credit money is created to finance investment expenditures. Then, economic output and employment is determined in the goods market according to the level of investment demand. The money spent on investment appears as income in the deposit accounts of other entrepreneurs or households. A credit-investment-income mechanism is thereby established and **investment demand creates corresponding saving**. The income generated through the production of new investment goods stimulates consumption demand. If everything runs well, expectations of agents become validated as payment obligations are met and the economy prospers. PKE thus assumes that there is a potential economic equilibrium that is determined by monetary and real factors. However, sudden changes in expectations may bring the economy out of equilibrium. Strong boom phases due to optimistic expectations can then be followed by drastic downturns, which are often induced by pessimistic expectations, distributional conflict or financial fragility. This depresses investment and consumption expenditures, invalidates income expectations and induces a period of debt defaults and economic crisis. These boom and bust phases are regarded as systemic features of monetary production economies that can only be mitigated by certain **economic institutions** and policies that help sustain economic expectations and activity and thereby reduce uncertainty about the future.

In PKE, employment is not determined in the labour market but rather labour demand is determined by aggregate demand in the goods market and not by the real wage rate. However, the labour market determines

nominal wages and therefore nominal unit labour costs. These have a strong influence on the general price level and hence inflation, as well as on income distribution. In contrast to orthodox economics, the level of prices is not determined by the level of the money supply in PKE and neither is the rate of inflation determined by the growth rate of money supply. Therefore, post-Keynesians do not regard inflation as being a monetary phenomenon. Instead, inflation is regarded as the outcome of unresolved **distributional conflict.** This conflict is caused by conflicting claims over the distribution of income between the main **social classes**, wage-earners in different industries or sectors, entrepreneurs and rentiers (i.e. people who earn capital income from property or financial assets), and the foreign sector in an open economy. For example, if the real wage target of workers or unions is in conflict with the profit target of firms, firms will partly pass through increases in nominal wages to prices, which will lead to inflation if the firms have price setting power. While inflation therefore is a usual outcome of the wage bargaining process even in “normal” times, it may be accelerated by sudden increases in the costs of inputs, e.g. because of currency depreciations or commodity price shocks.

The pursuit of profit makes capitalism a **dynamic system** that is usually growing over time due to investment and technical change. However, growth dynamics are regarded as strongly influenced by short-run economic performance which is mainly driven by aggregate demand. The economy is developing in **historical time**, which means that the past has a persistent effect on the future through **path dependency**. Temporary adverse shocks may therefore reduce potential output permanently, just as well as a high unemployment rate might push up the non-accelerating inflation rate of unemployment (NAIRU), and the actual growth rate influences the natural rate of growth. Short-run effects, therefore, heavily influence long-run economic development.

3. Ontology

Although PKE, like most other scientific disciplines, does not provide an elaborated philosophical ontology, its theories do imply presuppositions about the existence and nature of certain entities that make up economic reality. On the most abstract level, PKE presupposes that capitalist economies are composed of certain **social structures** that exist independently of scientific observation (in philosophy of science, this view is called **‘realism’**). More concretely, important social structures are **social classes** (e.g. workers, capitalists, rentiers), that determine to a large extent the economic behaviour of economic agents, **social institutions** (e.g. values, money, consumption norms, labour market regulations) and **social organisations** (e.g. firms, central banks, governments). These social structures form the nature of the **capitalist monetary production economy** that is the subject matter of post-Keynesian economic analysis. While post-Keynesians do believe that capitalist economies exhibit certain **regularities** that are generated by **causal mechanisms** and that can be captured by economic theories, they conceive of the economy as a **dynamic system** that is subject to a permanent change in **historical time**. Therefore, empirical regularities can change as well, so that economic theories cannot be regarded as universal laws.

While post-Keynesians certainly agree that social structures are

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ultimately based on human action, they reject the idea that social structures or macroeconomic phenomena can be reduced to the behaviour of individuals. On the contrary, individuals always act in a certain **institutional context** which shapes their beliefs and actions, and connects different classes of agents or types of economic units with each other. Social structures and macroeconomic phenomena may exert **causal powers** that affect human behaviour, which then in turn determines macro-phenomena. Macro-phenomena and institutions might even exhibit **emergent properties** that cannot be fully explained by aggregating individual actions. PKE thereby makes stronger ontological commitments than the classical rational choice model, which adheres to a strong ontological individualism that states that the social world is ultimately only composed of individuals and aggregates of individuals, and that nothing other than individual action can exert causal powers.

A very simple analogy to macro properties can be given by the following situation: If everyone in a cinema stands up, nobody improves his or her view of the film, even though if only one person would stand up, this would improve her view. This way of thinking led to the discovery of several **macroeconomic paradoxes**. The term paradox in this context means that what might seem reasonable for one single person, firm or state can lead to unintended, adverse or even irrational collective behaviour and outcomes when all individuals, firms or states act in a similar way. It is thus important to study macro-phenomena and their properties in their own right, and to look at how they in turn affect individual behaviour. This approach has been described as “holism”. All of these macroeconomic paradoxes are, for instance, important building blocks of a thorough explanation of the recent financial crisis. The most important of these paradoxes are summarized in the following table.

Macroeconomic Paradoxes	**What is it?**	**Mechanism**
Paradox of thrift	Higher saving rates lead to a reduction in total saving	When people save, they spend less, therefore businesses realise less revenue and reduce investment. Thereby, aggregate income declines and so does *total* saving.
Paradox of debt	Efforts to de-leverage might lead to higher leverage ratios	When everybody saves more out of their income to repay debt, aggregate income declines and leverage ratios rise.
Paradox of tranquility	Stability is destabilizing	A stable economy makes people more optimistic, leading to higher risk taking and higher gross debt-income ratios, which creates instability.

Source: Based on Lavoie 2014, p. 18.

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4. Epistemology

Again it must first be noted that PKE does not provide a coherent epistemology, and that individual post-Keynesians probably hold very different views about truth, knowledge and the degree to which we can obtain knowledge of economic reality. However, there are some implicit assumptions about the relationship between reality and scientific knowledge that are typical for PKE.

First, post-Keynesians share the view that it is the task of empirical science to collect and systematise statements about the world that **should reflect reality as adequately as possible**. Although economic models are always a highly simplified representation of actual causal mechanisms, they should ideally capture key aspects of **reality** as they exist. Models that succeed in describing and explaining empirical phenomena and whose assumptions do not contradict basic observations about actual regular economic events may not be regarded as strictly true, but certainly 'truer' than models that do not correctly explain actual causal mechanisms or that are based on assumptions that do not adequately reflect our experience of everyday economic activity and events.

Second, PKE seems to presuppose that it requires both **logical reasoning *and* empirical observation** to construct good economic theories. Rather than following a pure deductive method starting from, for instance, axioms about supposedly universal rules of human choice and then logically deriving more concrete propositions about empirical phenomena, PKE bases all theoretical assumptions on empirical evidence. However, that does not mean that in PKE all theoretical assumptions are sought to be strictly proven by inductive reasoning, i.e. statistical evidence. Theoretical assumptions should be in line with basic empirical knowledge of actual economic behaviour and phenomena. On top of that, logical reasoning plays an important role. On a very basic level, this implies a desire for **internal consistency** of the individual statements of a theory, but also **overall coherence**.

An example may be the link between microeconomic assumptions (like competition, pricing and firm behaviour) and macroeconomic theory (like the determination of functional income distribution, which is the distribution of the GDP to wages and profits). More specifically, logical reasoning plays an important role in creating economic theories that are consistent with the practice and implications of **double-entry bookkeeping** and **national accounting**. Theories that fail to take into account basic accounting identities and their substantive economic consequences are certainly regarded as flawed by post-Keynesians.

Third, post-Keynesians seem to share a certain awareness of the **limits to economic knowledge**. This is reflected in a certain caution and modesty with respect to the reliability of economic predictions about quantitative variables (e.g. GDP growth or inflation) of a dynamic economy that is subject to structural change. In such an economy particular empirical regularities only persist temporarily. Moreover, post-Keynesians do not seek to necessarily cast every relevant assumption or hypothesis into a formal framework, which would claim the possession of a degree of precision that may simply be not attainable due to the qualitative complexity of the respective phenomenon, e.g. herd behaviour in financial markets. This view

can be summarised by the rule of thumb that **it is better to be roughly right than precisely wrong**. Predictive success and the highest possible degree of quantitative precision are not regarded as the main objectives of economic theories, as these may not be reconcilable with the qualitatively complex and changing nature of the capitalist economies. Economists should be aware of the limits to economic knowledge and rather work to develop realistic theories that provide an adequate description of actual causal mechanisms and plausible explanations.

Notes

The general objective of economics in such a view is to tell plausible stories about the functioning of the economic system in the real world starting from stylised facts. This approach is strongly opposed to the epistemological viewpoint of instrumentalism, which does not care about the degree of reality reflected in core assumptions and only seeks to achieve correct predictions.

5. Methodology

As mentioned above, the post-Keynesian paradigm's most basic ontological principle, as is the case for the wider heterodox branch of economics, can be described as a **holistic** or **organicistic** approach. Accordingly, post-Keynesians advocate for **methodological holism**. A good example of this organicistic approach is the PK theory of choice, in which consumption or other expenditure decisions (i.e. residential investment, education), as well as financial decisions (i.e. portfolio decisions and credit taking) are strongly interdependent among individuals. Individuals, due to psychological reasons and fundamental uncertainty, compare themselves to others and built their decisions partly on rules of thumb and habits. These forms of group behaviour lie at the heart of post-Keynesian explanations of the recent financial crisis. On the grounds of this social determination of behaviour, post-Keynesian theory emphasizes the role of different classes (the main classes being workers, capitalists and rentiers) and institutions in society. This stands in strong objection to the still dominant neoclassical approach of methodological individualism, which requires that every explanation of economic phenomena has to start from individual behaviour.

PKE employs research methods that correspond to the principle of holism. Among others, the most important methods are formal macro modelling and econometric estimation, stock-flow consistent and agent-based modelling employing computer simulations, as well as institutional analyses and case studies.

PKs often cast their macroeconomic theories in simple **formal models**, which describe the causal linkages between macroeconomic variables through structural parameters. The underlying behavioural assumptions, for instance about consumer or firm behaviour, are typically not strictly modelled but justified by stylized facts and knowledge of empirical regularities. Income inequality, for instance, may enter a PK aggregate consumption function based on empirical studies about consumption behaviour showing that rich households have a lower propensity to consume or that poorer households try to adjust their consumption behaviour to the next higher social income class. These models thus do have **microfoundations**, but they are not cast in a formal constrained-optimisation-framework. However, unlike neoclassical theory,

assumptions about individual behaviour typically involve norm-oriented behaviour that is shaped by social institutions and social contexts.

Simple PK macro models can be static and focus on the marginal effects of changes in exogenous variables on economic outcomes in a goods market equilibrium. Dynamic models look at the change of economic variables over time and investigate the stability or instability of certain variables in the steady state, e.g. private debt. These models thus capture the aforementioned systemic nature of capitalism and allow for a depiction of dynamic and unstable processes.

The structural parameters of these models are often empirically estimated through standard econometric techniques. Likewise, theoretical hypotheses that are derived from PK theories may be empirically tested through **econometrics**. While some PK economists dislike the econometric approach because of their scepticism towards universal regularities, it seems that the majority of researchers embraces econometric work. Another popular way of assessing macroeconomic theories is the use of **comparative case studies** of different countries based on descriptive statics.

Stock-flow consistent (SFC) models represent another strand of post-Keynesian formal macro modeling that has become increasingly popular in recent years. Its most important analytical feature is the integration of behavioural equations derived from PK theory into a framework of rigorous accounting rules (note, however, that the SFC framework is not bound to one specific school of thought). The intuition behind the accounting framework is build on the principle that every asset is someone else's liability and every monetary inflow is some else's outflow. Therefore, the SFC framework ensures that all real and financial flows and stocks of the respective model are comprehensively integrated and can be traced back to their origin. Accordingly, SFC modeling fits very well within the holistic methodological approach of PKE and the comprehensive accounting allows to derive some relationships from pure accounting, meaning that these models rely less on behavioural equations. For instance, some variables function as adjustment variables which guarantee that the budget constraints of all agents or sectors are simultaneously met. This is important from a post-Keynesian perspective, since the object of analysis in PKE is a monetary production economy, as mentioned above. By now there is a variety of SFC models ranging from relatively small analytical models to very large and complex models that are solved numerically.

A relatively new development is the combination of SFC models with agent-based models (ABMs) in order to incorporate more diverse economic agents into post-Keynesian models. An ABM is a computer simulation of many interacting heterogeneous agents, which can be used to study the emerging aggregate outcomes from individual interactions and their feedback on the individual level. The ABM methodology differs greatly from the representative agent approach, since the state of any single agent over the course of the simulation does not necessarily provide any information about the aggregate state or behaviour of the model, and time plays an important role. Therefore, agent-based modeling is a promising endeavour to provide an explicit microstructure for the emergent macro properties of PK models.

On the meso-economic level, PKE makes use of **institutional**

Notes

analyses, which involve the **storytelling method**. Institutional analyses describe the structure, operation and connections of economic institutions and organisations, and what kind of regularities or tendencies arise from their interactions. An institutional analysis of the practice of banking and central banking, for instance, might elucidate how credit money is created, how interest rates are determined and how the central bank can affect the short-term interbank rate (e.g. LIBOR, Federal Funds Rate) through monetary policy. This allows for an explanation of the effects of monetary policy, its capacities and limits (e.g. why the central bank cannot control the money supply, but why it succeeds in targeting the short-term interbank rate), and a comparison of different monetary systems. This approach can also be employed to tell stories about the occurrence of certain economic phenomena, e.g. the financial crisis 2007-08, as a result of more long-term structural institutional changes in the financial sector. Although such institutional analyses are based on specific empirical cases and typically do not involve formalisation, they often do provide more general conclusions about economic behaviour and events. Moreover, they may underpin formal macroeconomic models that in themselves are unable to provide rich descriptions of the underlying economic institutions and behaviour that generate certain macroeconomic outcomes.

6. Ideology and Political Goals

PK theory itself is in principle compatible with a wide range of ideologies or goals. To exaggerate a bit, on the one hand, PKE can be an analytical framework of a socialist politician who wants to overcome capitalism or, on the other hand, it can be a tool for a pro-capitalist investment banker to analyse the economic environment that she finds herself in. The point is that PKE lends itself to different ideologies, since its main aim is to understand the dynamics of capitalist systems from a macroeconomic point of view, regardless of whether one wants to maintain or overcome capitalism. Nevertheless, every academic has a specific ideology that he or she employs in the assessment of a theory.

Post-Keynesianism has not been strongly or uniquely associated with any major political movement. However, it is safe to say that post-Keynesians in general do not wish to eliminate capitalism, they wish to tame it and envisage an economic system which would constitute some middle way between liberalism and socialism. Therefore, some central ideological foundations and political goals of many post-Keynesian economists can also be found in the historical development of social democratic thought and corresponding emphasis on the prospects for non-zero sum game, class-cooperative capitalism. However, many post-Keynesians strongly disagree with the political programs that were put forward by social democratic parties of Western capitalist countries after the neoliberal turn to the “third way” in the 1990s.

In justifying the pursuit for socially progressive capitalism, many post-Keynesian economists claim to find historical precedence for these prospects in the Golden Age or Fordist regime of capitalism, from the 1950s to the 1970s. This period notably featured, in advanced capitalist countries, **steady economic growth**, a **more egalitarian distribution of income**, full (or close to full) employment, a **stronger social security net**, **greater regulation of the financial sector** and a more **actively**

interventionist state engaged in aggregate demand management than that seen during the subsequent 'neoliberal era'. The features of this era can be seen as some kind of blueprint for the kind of economic system post-Keynesians advocate for. In order to get there, the overarching political objective is to change the effectiveness of the state and the political-economic system. The question of how this can be achieved in the social and political domain is not often directly answered in PK literature. While there are some attempts in PKE which investigate the question of the socio-economic and socio-political factors that can lead to certain shifts of overall economic or capitalist regimes, it can be argued that these questions are not the major concern of PK academic literature. Rather, PKE states what needs to be achieved at the macroeconomic level in order to avoid the instabilities and/or persistent structural weaknesses related to capitalism. These include stagnation, excessive inflation or deflation, recessions, financial and economic crises, among others. For example, many post-Keynesians argue that a more even distribution of income between capitalists and workers will boost aggregate demand and growth and can therefore result in increasing the gross profits of the capitalist class. This emphasises the fact that for PKE, there is no fundamental trade-off between social cohesion as a political target and growth as the economic means to maintain high levels of employment and to improve living conditions. However, as the analysis of social developments leading to political change are of minor concern relative to specific economic policy recommendations in PKE, one can easily get the impression that the PK approach to politics has a certain affinity to technocracy. This is despite many post-Keynesians being well aware of the socio-political challenges hindering their "technical" recommendations from being implemented.

Notes

Most post-Keynesian economists would subscribe to the idea of achieving a more socially just system, with full employment, low levels of income inequality and high levels of individual freedom. While today many post-Keynesian economists do recognise that infinite growth is problematic from an environmental perspective, it remains the central instrument to achieve full employment and therefore can be seen as a key goal of PKE.

PKE favours a macroeconomic policy mix with an active role for **fiscal policy** to stabilise the economy in the short and the long run. **Monetary policy** should target low interest rates to provide stability in the monetary, financial and real sector. Other policies to stabilise the economy could be achieved with strict financial market regulation via credit controls, asset-based reserve requirements, among others. Also, it is considered important that central banks act as lenders of last resort. **Wage and incomes policies** should lead to steady nominal unit labour cost growth in line with the desired inflation rate. PK economists are generally supportive of trade unions as they have an important influence on wage bargaining coordination and therefore price stability. Regarding **international economic policies**, PKE does not regard free trade as beneficial for poorer countries as long as it does not help them to build their own competitive manufacturing sectors. To achieve that post-Keynesians favour capital controls, managed exchange rates and infant industry protection.

7. Current Debates and Analyses

There are different areas of debates and analyses that PK research has

concentrated on. The focus that is placed on different problems and research areas is strongly influenced by the developments of economies and societies, by fads and fashions, by the advancement of computer technology and, of course, by historical events.

Notes

One area where many contributions have recently been made is in the use of econometric studies trying to determine if a country is **wage-led or profit-led**. While in wage-led countries an increase in the wage share leads to higher aggregate demand, it reduces aggregate demand in a profit-led country. In extensions to this approach, the effects of personal income inequality, financialisation, open economy issues, fiscal policy and other factors on growth are being researched. Furthermore, the notion of **financialisation** has recently given rise to a rich literature that describes and analyses structural changes in many economies towards a greater importance and dominance of the financial sector. The contributions in this field range from institutional and descriptive analyses on the micro- and meso-level to econometric studies and formal macroeconomic models. PK contributions to the financialisation debate highlight its negative effects on investment, income distribution and financial stability. However, there are still puzzles to be solved such as how financialisation relates to neoliberalism.

With the historical event of the Global Financial Crisis (GFC), the interest in Hyman Minsky's **financial instability hypothesis** was renewed, in an attempt to better understand the complex connection of the real and the financial sector and the tendency for crises. This is being done especially with the help of dynamic models that seek to cast Minsky's ideas in a more rigorous formal framework.

The overall awareness about ecological problems and, in particular, climate change have also had an influence on PKE. However, it has to be said that traditionally, post-Keynesians did not spend a lot of time thinking about **environmental issues** but have focussed rather on achieving full employment by economic growth. However, the focus on environmental constraints has received a lot more attention in recent years. PK economists see ecological economics as having strong microeconomic foundations but relying too much on neoclassical macroeconomics, and so they attempt to introduce PK macroeconomics to the analysis.

Finally, there has been a strong increase in the diversity of modelling methods used by PK economists. For example, the GFC has generally reaffirmed the post-Keynesian insistence on the important role of money and finance for economic activity. This has given another boost to **stock-flow consistent modelling**. Large scale SFC models are being developed that describe an entire national economy, while multi-country open economy models look at international trade and finance. Another field of advancement is agent-based modelling to understand how the complex interactions on the microeconomic level can affect macroeconomic outcomes. This is still in early stages as post-Keynesians have only recently started to work with these models. Other authors focus on issues like disequilibria, instability, and how the economy moves from one equilibrium to another through time. This research area employs increasingly complex models with non-linear dynamics that often require computer techniques to numerically simulate different possible solutions to the model. These models give an insight into

the sometimes chaotic adjustment processes that happen in the real world and thus have a very different flavour than the tranquil and harmonious mainstream general equilibrium models.

8. Delineation: Subschools, other Economic Theories, and other Disciplines

Strand	Major themes	Inspiration
Fundamentalist	Fundamental uncertainty Monetized production economy Financial instability Methodology	J.M. Keynes Hyman Minsky older Joan Robinson Sidney Weintraub
Kaleckians	Income and distribution models The traverse Effective demand Class conflict Pricing	Donald Harris Michal Kalecki younger Joan Robinson Joseph Steindl
Sraffians	Relative prices Technical choice Multisectoral production systems Capital theory Joint production Long-run positions	Krishna Bharadwaj Pierangelo Garegnani Luigi Pasinetti Pierro Sraffa
Institutionalists	Pricing Theory of the firm Monetary institutions Behavioural economics Labour economics	Alfred Eichner John Kenneth Galbraith N. Georgescu-Roegen Abba Lerner Thorstein Veblen
Kaldorians	Economic growth Productivity regimes Open economy constraints Real–financial nexus	Wynne Godley Richard Goodwin Roy Harrod Nicholas Kaldor

Source: Lavoie 2014, 43.

The post-Keynesian school is comprised of several subschools, each with emphasis on different phenomena, while agreeing at the same time on important key notions. First, that **monetary variables** are essential to the understanding of the economy. Second, **effective demand** drives the

economy in the short as well as in the long-run. Third, the **future is fundamentally uncertain**, and so it is impossible to apply probabilities to different possible futures. Fourth, the economy is **path-dependent** which is why there is no predetermined equilibrium in the future to which the economy can adjust. And finally fifth, they all regard **distributional conflicts** as very influential on the overall macroeconomic development in the short as well as in the long run.

Notes

Relying too heavily on Keynes as the intellectual founding father also has its disadvantages as it can lead to sterile discussions about what Keynes truly said, or what Keynes truly, truly said. Keynes' contributions were in part themselves based on neoclassical foundations, as he was a student of Alfred Marshall. Therefore, some economists claim that Kalecki - who published even before Keynes, but only in Polish at first - was in a way the true founder of PKE, as his analysis was less inspired by neoclassical theory.

The name of post-Keynesian economics itself obscures the contributions of several different and influential authors. The so-called **Fundamentalists** base their theory mainly on Keynes himself and focus on the topics of the monetised production economy and financial fragility. Their analysis made great contributions to the understanding of the Global Financial Crisis.

Kaleckians are mainly interested with output and employment, business cycles, growth theory and pricing issues. The **Sraffians** focused more on relative prices and choices of techniques, among others. The **Institutionalists** encompass authors that look at the institutional setting of the economy. These include Minsky (at least in parts), behavioural economists of post-Keynesian tradition as well as the Modern Money Theorists who focus very intensely on the institutional framework of government, banks and central banks. **Kaldorians** mainly focus on long-run growth, and highlight the constraints that open economies have to face regarding growth and how economic structure matters for development.

PKE has links to several other heterodox schools of thought, most importantly with Marxism and institutional economics, which also reject mainstream economics. The object of analysis of both Marxism and PKE is the capitalist economy where the relationship between employers and employees as well as the pursuit of profit are of fundamental importance. For Marxists and PKE, money is a central element for the analysis of inherently unstable capitalist economies. Furthermore, both schools of thought reject Say's law, though some Marxists only do so for the short run. Nevertheless, there are also important points of disagreement between the two paradigms. Importantly, most PK economists reject the Marxian labour theory of value or at least regard it as a rather useless concept. The Marxian idea of a tendency of the rate of profit to fall is another weakness. Both of these examples relate to differences in the methodological, ontological and epistemological views and beliefs in both schools. The links between PKE and institutional economics are also very strong and maybe even stronger than the links to Marxism. PKE and institutional economics both emphasise the importance of social norms, conventions and habit formation to individual behaviour. In fact, PKE makes great use of the analysis of microeconomic and socio-political issues that can be found in institutional economics. However, there are again some important differences between

both schools, especially regarding methodology. For example, many institutional economists reject the formal and econometric modeling approaches that can be found in PKE.

Notes

9. Delineation from the Mainstream

Summarising what has been mentioned above, PKE and mainstream economics differ regarding their epistemology and ontology, their understanding of rationality, their methods, and their economic and political core.

First, while PKE stresses the importance of **realism** - trying to tell relevant stories about the economy, based on real facts - mainstream economics follows the view of **instrumentalism** - which does not care about the degree of reality reflected in their assumptions, as long as they will allow precise predictions. Mainstream economists therefore use the concept of a perfect **optimising agent**. Also known as homo economicus, this concept allows them to make seemingly accurate predictions about the future economy, while not taking into account that humans do not behave like this agent in reality. In contrast, PKE uses the concept of **satisficing agents**. Like real humans, these follow rules of thumb and make decisions that suit an environment with fundamental uncertainty. The method of PKE follows **holism**, acknowledging that humans are social beings living in a complex system of institutions, gender, culture etc. In this view sensible behaviour by individuals on the micro level can lead to unintended consequences on the macro level (see the paradoxes above for examples). Mainstream economics follows the idea of **individualism** where individual behaviour is simply aggregated to form a measure of macroeconomic level, ruling out any micro-macro paradoxes beforehand.

The economic core of mainstream economics is **scarcity** of resources, namely capital and labour. Therefore, mainstream economists focus on the allocation of these resources and hence view prices as an indicator of scarcity. In contrast, PKE considers empirical evidence and regards the economy to be generally running below full capacity. This shapes their view of the economy being in **abundance**. Their main concern is rather how to employ all the idle labour and capital. They understand prices as indicators of the unit production costs.

Finally, the political core of mainstream economics is based on the belief that **unregulated markets** lead to an optimal allocation of scarce resources. PKE, although acknowledging the positive entrepreneurial effects, is highly suspicious of unfettered markets and tend way more toward tight **regulation**.

4.4.Baumol’s Approach to Transaction Demand for Money

2. Baumol’s Inventory Approach to Transactions Demand for Money:

Instead of Keynes’s speculative demand for money, Baumol concentrated on transactions demand for money and put forward a new approach to explain it. Baumol explains the transaction demand for money from the viewpoint of the inventory control or inventory management similar to the inventory management of goods and materials by business firms.

Notes

As businessmen keep inventories of goods and materials to facilitate transactions or exchange in the context of changes in demand for them, Baumol asserts that individuals also hold inventory of money because this facilitates transactions (i.e. purchases) of goods and services.

In view of the cost incurred on holding inventories of goods there is need for keeping optimal inventory of goods to reduce cost. Similarly, individuals have to keep optimum inventory of money for transaction purposes. Individuals also incur cost when they hold inventories of money for transactions purposes.

They incur cost on these inventories as they have to forgone interest which they could have earned if they had kept their wealth in saving deposits or fixed deposits or invested in bonds. This interest income forgone is the cost of holding money for transactions purposes. In this way Baumol and Tobin emphasised that transaction demand for money is not independent of the rate of interest.

It may be noted that by money we mean currency and demand deposits which are quite safe and riskless but carry no interest. On the other hand, bonds yield interest or return but are risky and may involve capital loss if wealth holders invest in them.

However, saving deposits in banks, according to Baumol, are quite free from risk and also yield some interest. Therefore, Baumol asks the question why an individual holds money (i.e. currency and demand deposits) instead of keeping his wealth in saving deposits which are quite safe and earn some interest as well.

According to him, it is for convenience and capability of it being easily used for transactions of goods that people hold money with them in preference to the saving deposits. Unlike Keynes both Baumol and Tobin argue that transactions demand for money depends on the rate of interest.

People hold money for transaction purposes "to bridge the gap between the receipt of income and its spending." As interest rate on saving deposits goes up people will tend to shift a part of their money holdings to the interest-bearing saving deposits.

Individuals compare the costs and benefits of funds in the form of money with the interest- bearing saving deposits. According to Baumol, the cost which people incur when they hold funds in money is the opportunity cost of these funds, that is, interest income forgone by not putting them in saving deposits.

Baumol's Analysis of Transactions Demand:

A Baumol analysis the transactions demand for money of an individual who receives income at a specified interval, say every month, and spends it gradually at a steady rate. This is illustrated in Fig. 19.2. It is assumed that individual is paid Rs. 12000 salary cheque on the first day of each month.

Notes

Suppose he gets it cashed (i.e. converted into money) on the very first day and gradually spends it daily throughout the month. (Rs. 400 per day) so that at the end of the month he is left with no money. It can be easily seen that his average money holding in the month will be Rs. = 12000/2 = Rs. 6,000 (before 15th of a month he will be having more than Rs. 6,000 and after 15th day he will have less than Rs. 6,000).

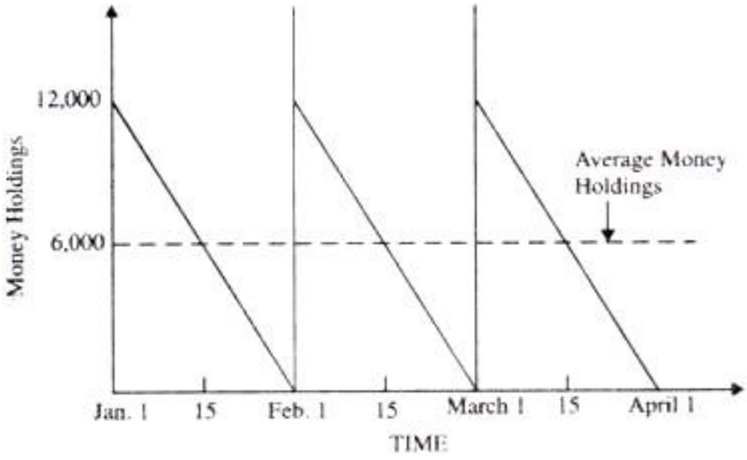


Fig. 19.2. *Stream of Cash Payments and Transactions Demand for Money*

Average holding of money equal to Rs. 6,000 has been shown by the dotted line. Now, the question arises whether it is the optimal strategy of managing money or what is called optimal cash management. The simple answer is no. This is because the individual is losing interest which he could have earned if he had deposited some funds in interest-bearing saving deposits instead of withdrawing all his salary in cash on the first day.

He can manage his money balances so as to earn some interest income as well. Suppose, instead of withdrawing his entire salary on the first day of a month, he withdraws only half of it i.e. (Rs. 6,000 in cash and deposits the remaining amount of Rs. 6,000 in saving account which gives him interest of 5 per cent, his expenditure per day remaining constant at Rs. 400.

This is illustrated in Fig. 19.3. It will be seen that his money holdings of Rs. 6,000 will be reduced to zero at the end of the 15th day of each month. Now, he can withdraw Rs. 6,000 on the morning of 16th of each month and then spends it gradually, at a steady rate of 400 per day for the next 15 days of a month. This is a better method of managing funds as he will be earning interest on Rs. 6,000 for 15 days in each month. Average money holdings in this money management scheme is Rs. 6000/2 = 3000

Notes

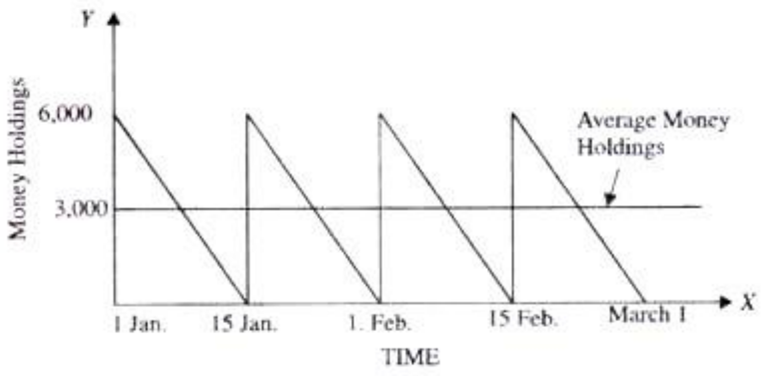


Fig. 19.3. *Transactions Demand for Money and Stream of Cash Payments*

Likewise, the individual may decide to withdraw Rs. 4,000 (i.e., 1/3rd of his salary) on the first day of each month and deposits Rs. 8,000 in the saving deposits. His Rs. 4,000 will be reduced to zero, as he spends his money on transactions, (that is, buying of goods and services) at the end of the 10th day and on the morning of 11th of each month he again withdraws Rs. 4,000 to spend on goods and services till the end of the 20th day and on 21st day of the month he again withdraws Rs. 4,000 to spend steadily till the end of the month. In this scheme on an average he will be holding Rs. 4000/2 = 2000 and will be investing remaining funds in saving deposits and earn interest on them. Thus, in this scheme he will be earning more interest income.

Now, which scheme will he decide to adopt? It may be noted that investing in saving deposits and then withdrawing cash from it to meet the transactions demand involves cost also. Cost on brokerage fee is incurred when one invests in interest-bearing bonds and sells them.

Even in case of saving deposits, the asset which we are taking for illustration, one has to spend on transportation costs for making extra trips to the bank for withdrawing money from the Savings Account. Besides, one has to spend time in the waiting line in the bank to withdraw cash each time from the saving deposits.

Thus, the greater the number of times an individual makes trips to the bank for withdrawing money, the greater the broker's fee he will incur. If he withdraws more cash, he will be avoiding some costs on account of brokerage fee.

Thus, individual faces a trade-off problem-, the greater the amount of pay cheque he withdraws in cash, less the cost on account of broker's fee but the greater the opportunity cost of forgoing interest income. The problem is therefore to determine an optimum amount of money to hold. Baumol has shown that optimal amount of money holding is determined by minimising the cost of interest income forgone and broker's fee. Let us elaborate it further.

Let the size of the pay cheque (i.e. salary) be denoted by Y, the average amount of the cash he withdraws each time the individual goes to the bank by C, the number of times he goes to the bank to withdraw cash by T, broker's fee which he has to bear each time he makes a trip to the bank by

Notes

b. In the first scheme of money management when he gets his whole pay-cheque cashed on the first day of every month he incurs broker's fee only once since he makes only a single trip to the bank.

Thus T in our first case is equal to one T = Y/C = 12000/12000 = 1 because in this case C = Y. In the second, case, T = 12000/6000 =2 and in the third case T = 12000/4000 =3.

Interest income lost by holding money is the average amount of money holding multiplied by the interest rate. As seen above, average money held is one half of cash withdrawn each time (i.e., C/2).

Thus, interest income lost in the first case is rC/2 = 5/100 x 1200/2 = Rs. 300, in the second case interest lost =r.C/2 = 5/100 x 6000/2 = 150 and m the third case it is 5/100 x 4000/2 = 100.

Thus the total cost incurred on broker's fee and interest income forgone is given by

$$\text{Total Cost} = bT + r.C/2$$

Where b stands for broker's fee

As seen above, T = Y/C

Therefore, Total Cost = Y/Cb + r.C/2

Baumol has shown that average amount of cash withdrawal which minimises cost is given by

$$C = \sqrt{2bY/r}$$

This means that average amount of cash withdrawal which minimise cost is the square root of the two times broker's fee multiplied by the size of individual's income (Y) and divided by the interest rate. This is generally referred to as Square Root Rule.

For this rule, it follows that a higher broker's fee will raise the money holdings as it will discourage the individuals to make more trips to the bank. On the other hand, a higher interest rate will induce them to reduce their money holdings for transaction purposes as they will be induced to keep more funds in saving deposits to earn higher interest income. That is, at a higher rate of interest transactions demand for money holdings will decline.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What are the Keynes suggested three motives which led to the demand for money in an economy?

Keynes thought that transactions demand for money was independent of rate of interest. According to him, transactions demand for money depends on the level of income. However, Baumol and Tobin have shown that transactions demand for money is sensitive to rate of interest.

As explained above, interest represents the opportunity cost of holding money instead of bonds, saving and fixed deposits. The higher the rate of interest, the greater the opportunity cost of holding money (i.e. the greater the interest income forgone for holding money for transactions).

Notes

Therefore, at a higher rate of interest people will try to economise the use of money and will demand less money for transactions. At a lower interest rate on bonds, saving and fixed deposits, the opportunity cost of holding money will be less which will prompt people to hold more money for transactions.

Therefore, according to Baumol and Tobin, transactions demand curve for money slopes downward as shown in Fig. 19.4. At higher interest rates, bonds, savings and fixed deposits are more attractive relative to money holding for transactions.

Therefore, at higher interest rates people tend to hold less money for transaction purposes. On the other hand, when the rates of interest are low, opportunity cost of holding money will be less and, as a consequence, people will hold more money for transactions. Therefore, the curve of transaction demand for money slopes downward.

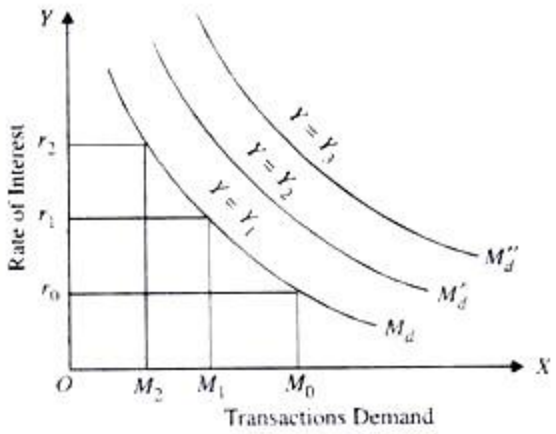


Fig. 19.4. *Transactions Demand for Money : Baumol-Tobin Approach*

It will be observed from the square root rule given above that transactions demand for money varies directly with the income (Y) of the individuals. Therefore, the higher the level of income, the greater the transactions demand for money at a given rate of interest.

In Fig. 19.4. the three transactions demand curves for money M_d, M_d' and M_d", for three different income levels, Y_1, Y_2, Y_3 are shown. It will be known from the square root rule that optimum money holding for transactions will increase less than proportionately to the increase in income. Thus, transactions demand for money, according to Baumol and Tobin, is function of both rate of interest and the level of income.

$$M_{td} = f(r, Y)$$

Where M_{td} stands for transactions demand for money, r for rate of interest and Y for the level of income.

4.5.Check your progress Questions.

Notes

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What are the Keynes suggested three motives which led to the demand for money in an economy?

………………………………

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) Define SFC?

4.6.Answer to check your progress Questions.

1. (1) the transactions demand, (2) the precautionary demand, and (3) the speculative demand.

2. *Stock-flow consistent (SFC) models* represent another strand of post-Keynesian formal macro modeling that has become increasingly popular in recent years. Its most important analytical feature is the integration of behavioural equations derived from PK theory into a framework of rigorous accounting rules (note, however, that the SFC framework is not bound to one specific school of thought).

4.7.Summary

In this unit you have learnt about the meaning of demand for money .This knowledge would make you understand what is demand for money and how it can be worked in the classical Approach and post. They Keynesian approach .The concept such as classical and post. Keynesian would have made you to distinguish these activites form the demand for money activities and you might have learnt about the meaning and its Boumo is approaches in the transaction demand for money.

4.8.Key words

Precautionary, Delineation

4.9.Self Assessment Questions and Exercises.

Notes

Short Answer Questions

1. Define SFC?

2. What are the Keynes suggested three motives which led to the demand for money in an economy?

Long answer Questions.

1. Explain the The Classical Approach with the The Keynesian Approach and Post Keynesian Developments?

2. Baumol's Approach to Transaction Demand for Money?

4.10.Further Readings

Ghosh and Rama Ghosh, (1985), "**Fundamentals of Monetary Economics"**
,
2nd Edition, Himalaya Publishing House, Mumbai.

UNIT-5: DEMAND FOR MONEY - II:

Notes

5.1. Tobin's Theory of Speculative Demand for Money

Tobin's Portfolio Balance Approach (With Diagram) | Demand for Money

Let us make an in-depth study of the Tobin's Portfolio Balance Approach.

The main problem with Keynesian approach to the demand for money is that it suggests that individuals should, at any given time, hold all their liquid assets either in money or in bonds, but not some of each.

This is obviously not true in reality.

The second approach — Tobin's model of liquidity preference — deals with this problem by showing that if the return on bonds is uncertain, that is, bonds are risky, then the investor worrying about both risk and return is likely to do best by holding both bonds and money.

Portfolio theories like the one presented by Tobin emphasises the role of money as a store of value. According to these theories, people hold money as part of their portfolio of assets. The reason for this is that money offers a different combination of risk and return than other assets which are less liquid than money — such as bonds.

To be more specific, money offers a safe (nominal) return, whereas the prices of stocks and bonds may rise or fall. Thus Tobin has suggested that households choose to hold money as part of their optimal portfolio.

Portfolio theories predict that the demand for money depends on the risk and return associated with money holding as also on various other assets households can hold instead

Notes

of money. Furthermore, the demand for money should depend on real wealth, because wealth measures the size of the portfolio to be allocated among money and the alternative assets.

For instance, the money demand function may be expressed as:

$(M/P)_d = f(r_s, r_b, \pi^e, W)$

where r_s = the expected real return on stock, r_b = the expected real return on bonds, π^e = the expected inflation rate and W= real wealth. An increase in r_s or r_b reduces money demand, because other assets become more attractive. An increase in n^e also reduces money demand, because money becomes less attractive. An increase in W raises money demand, because higher wealth means a larger portfolio.

It is against this backdrop that we study the portfolio theory of money demand.

Speculative Demand for Money as Behaviour toward Risk:

Tobin ignored the determination of the transactions demand for money and considered only the demand for money as a store of wealth. The focus is on an individual's portfolio allocation between money-holding and bondholding, subject to the wealth constraint, i.e., W = M + B, where W is the total fixed wealth, M is money and B is bond.

In Tobin's theory there is no such thing as fixed normal level to which interest rates are always expected to return as has been postulated by Keynes. Following Tobin we can assume that the expected capital gain is zero. This is because the individual investor expects capital gains and losses to be equally likely.

The best expectation of the return on bonds is simply the prevailing market rate of interest (r). But this is just the expected return on bonds. The actual return also includes some capital gain or loss, since the interest rate does not generally remain fixed.

Thus bonds pay an expected return of interest, but they are a risky asset. Their actual return is uncertain due to the fact that the market rate of interest fluctuates even in the short run.

In contrast, money is a safe asset because it yields no return at all. At the same time money is a safe asset since no capital gain or loss is made by holding money. In Tobin's view an individual will hold some proportion of wealth in money for reducing the overall riskiness of his portfolio.

If only bonds are held, returns would be maximum no doubt but the risk to which the investor is exposed will also be maximum. A risk- averse investor would voluntarily sacrifice some return for a reduction in risk. Tobin argues that money as an asset is demanded as an aversion to risk.

Tobin's theory is explained in Fig. 19.4. On the vertical axis of the upper quadrant we measure the expected return to the portfolio; on the horizontal axis we measure the riskiness of the portfolio. The expected return on the portfolio is the interest that can be earned on bonds.

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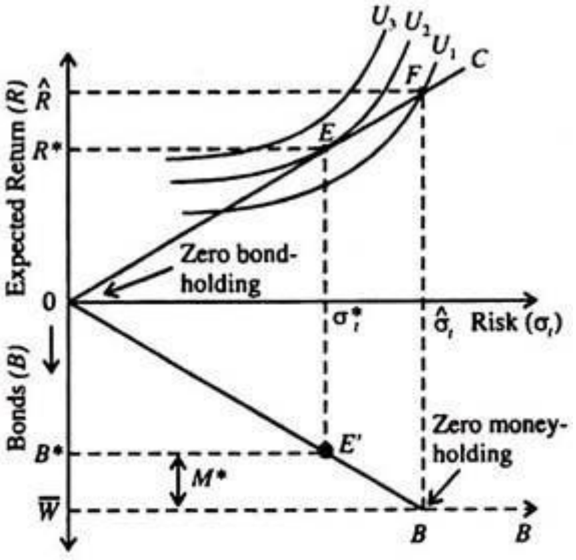


Fig. 19.4 Determination of the Optimal Portfolio

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Let us denote the expected total return by R and the total risk of the portfolio as a σ_t. If an individual holds all his wealth (W) in money and none in bonds, i.e., W = M + 0, both R and σ_t will be zero, as shown by the origin (point 0) in Fig. 19.4. With an increase in the proportion of bonds, i.e., W = M + B; as M falls and B increases, R and a, will both rise.

The opportunity line C is a locus of points showing the terms on which the individual investor can increase R at the cost of increasing σ_t. A movement along C from left to right shows that the investor increases his bond holding only by reducing his money holding.

The lower quadrant of Fig. 19.4 shows alternative portfolio allocations, resulting in different combinations of R and σ_t. The vertical axis measures bond holding. The amount of bonds (B) held in W increases as the investor moves down the vertical axis to a maximum of W.

The difference between W and B is the asset demand for money (M). The line OB in the lower part of the diagram shows the relationship between a, and B. As the proportion of B in W increases, σ_t also increases. This

means that as the proportion of bonds in the portfolio increases, the total risk of the portfolio increases, too.

Preference of the Investor: Risk-Aversion:

Notes

The optimal portfolio allocation depends on the preferences of the investor. Here we assume that the investor is risk-averse. He wants the best of both the worlds — a high return on the portfolio by avoiding risk. He will accept more risk if he is compensated by an increase in expected return. Let us assume that the utility function of the investor is $U = f(R, \sigma_t)$ …(9)

where an increase in R increases utility (U) and an increase in σ_T reduces U. In Fig. 19.4 we show three indifference curves of the investor for three levels of utility U_1, U_2 and U_3. Each indifference curve shows the risk-return trade-off, i.e., the terms on which the investor is desirous of taking more risk if compensated by a higher expected return.

All the points on any such indifference curve yield the same fixed level of utility.

Any movement from U_1 to U_2 and from U_2 to U_3 implies higher level of utility, i.e., higher levels of R and the same or even lower levels of σ_t. The indifference curves are upward sloping because the investor is risk-averse. He will take more risk only if compensated by a higher return. Moreover, the curves become steeper as the investor moves to the right, implying increasing risk aversion.

If we make this assumption, then the more risk the individual has already taken on, the greater will be the increase in expected return required for the investor to be exposed to a greater degree of risk. We may now determine the optimal portfolio allocation of a risk averse investor.

Optimal Portfolio Allocation:

A risk-averse investor will move to that point along the line C which enables him to reach the highest attainable indifference curve. At that point he ends up choosing that portfolio which he intends to choose and, thus, maximises his utility. The reason is obvious. At the tangency point E, with $R = R^*$ and $\sigma_t = \sigma^*_t$, the terms on which the investor is able to increase expected return on the portfolio by taking more risk, shown by the slope of the line C, is equated to the terms on which he (she) is willing to make the trade-off, as is measured by the slope of the indifference curve.

From the lower part we see that this risk -return combination is achieved by holding an amount of bonds equal to B*, and by holding the remainder of wealth ($\bar{W} - B^* = M^*$) in the form of money.

The demand for money thus shows the investor's 'behaviour towards risk', i.e., the result of seeking to reduce risk below what it would be if $\bar{W} = B$ and $M = 0$. In Fig. 19.4 such an all-bonds-portfolio would be associated with risk of σ_t and the expected return of R, as shown by point F in the upper part of the diagram.

This portfolio yields a lower level of utility than that represented by bond holdings of B* and money holdings of M*.

The reason is that as the investor moves to the right of point E along the line 0C, the additional return expected from the portfolio by holding

more bonds (and less money) is not adequate to compensate the investor for the additional risk (the slope of the line 0C is less than that of the indifference curve U_2). The movement to point F takes the investor to a lower indifference curve, U_1.

Interest Rate Changes and the Speculative Demand for Money:

In Tobin's theory the amount of money held as an asset depends on the level of the interest rate. Fig. 19.5 shows the relationship between interest rate and asset demand for money. An increase in the rate of interest from r_0 to r_1 and then to r_2 will improve the terms on which the expected return on the portfolio can be increased by taking more risk.

So the line 0C becomes steeper. It rotates anticlockwise from $C(r_0)$ to $C(r_1)$ and then to $C(r_2)$.

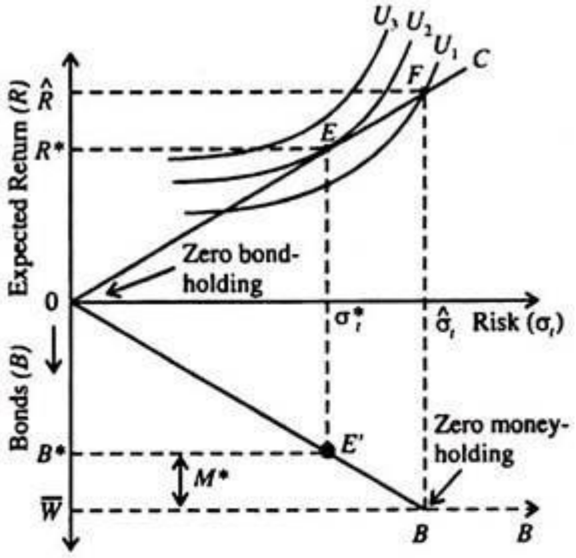


Fig. 19.4 Determination of the Optimal Portfolio

The investor responds by taking more risk and earning higher expected returns by moving from E to F and then to G. It may be noted that each point is one of portfolio optimisation. In this case his holdings of bonds (risky asset) increase (from B_0 to B_1, and then to B_2) and money holdings fall (from M_0 to M_1, then M_2).

In short, as the interest rate rises, a given increase in risk, which corresponds to a given increase in the amount of bonds in the portfolio, will result in a greater increase in expected return on the portfolio.

Comments:

In Tobin's theory, like that of Keynes, the speculative demand for money varies inversely with the interest rate. The reason is that an increase in the rate of interest implies an increase in the payment received for taking more risk. When the interest rate increases, the investor is eager to put a larger proportion of his portfolio into the risky asset, bonds — and thus a smaller proportion into the safe asset — money.

From the portfolio theories, we can look at the money demand function $(M/P)_d = f(Y, i)$ as a useful simplification. First, it uses real income Y as a proxy for wealth' W. Secondly, the only return variable it includes is the nominal interest rate, which is the sum of the real return on bonds and

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Are portfolio theories really useful for studying the demand for money? It depends on which measure of money we are considering. If we consider any narrow money (M_1), it is to be treated as a dominated asset, in the sense that as a store of value, it exists along with other assets that are always better. Thus, as Mankiw has suggested: "It is not optimal for people to hold money as part of their portfolio, and portfolio theories cannot explain the demand for these dominated forms of money."

It may also be added that portfolio theories are more plausible as theories of money demand if we adopt a broad definition of money. Although the portfolio approach to money demand may not be plausible when applied to M_1, it can suggest a clear explanation of the demand for M_2 or M_3.

Tax Rates and Portfolio Choice:

A major portion of the revenues to a successful investment goes to the government as taxes. Since different assets are treated differently by the tax laws, tax considerations are obviously important in choosing a portfolio. After all, rational investors care about after-tax returns, not before-tax returns.

Government bonds illustrate this point. These bonds yield a lower return than do corporate bonds (debentures) of comparable risks and liquidity. Still, people buy government bonds because they are generally exempt from income tax and capital gains tax. The higher an investor's income, the more valuable these tax exemptions are, because his tax savings are greater the higher the tax rate.

The higher demand for these tax-exempt bonds from high income investors pushes up their price, which reduces the return received on the bonds. We can expect the return to decline to the point where the after-tax return for high income individuals is at most slightly higher than for an ordinary taxable bond of comparable risk.

Loss Offset and the Return to Risk:

No financial investment gives a guaranteed rate of return and an individual who buys equity shares undertakes a risk. No investment is a safe bet. In other words, to make an investment is to gamble, and the investors should be interested in the gamble only if the value of probable gain outweighs that of probable losses.

Since an investor's marginal utility of money income falls, an even-money or a fair bet (in which there is fifty-fifty chance of winning or losing) may not always be acceptable. If a tax on investment income worsens the odds by reducing the expected return, investment will fall. But such a tax may not always reduce the odds. It will reduce the investor's return if he wins.

However if a loss offset is allowed for, it will also reduce his loss if he loses. Given a proportional tax, both are equiprobable events. Both probable gains and probable losses will be reduced at the same rate. The tax

may induce an investor either to increase or to reduce his risk-taking — depending on circumstances.

Notes

The possibility of increased risk taking is shown in Fig. 19.6 where the rate of return is measured on the vertical axis and the risk is shown on the horizontal axis. Let us suppose, for the sake of simplicity, that the investor chooses between holding cash (which is completely safe) and a single alternative, say a corporate bond, of given risk.

The opportunity line 0A shows the combinations of risk and return available to him by choosing different mixes of cash and bonds. With 100% cash holding, he will stay at point zero where he assumes no risks and receives no return either. If all his funds are invested in bonds he will move to point B, with risk 0C and return 0D.

Before tax the investor is at point E_1 at which his opportunity line 0A just touches the highest attainable indifference curve U_2. His risk equals 0F and return is 0G. Here the indifference curve is drawn so as to show the increasing risk aversion.

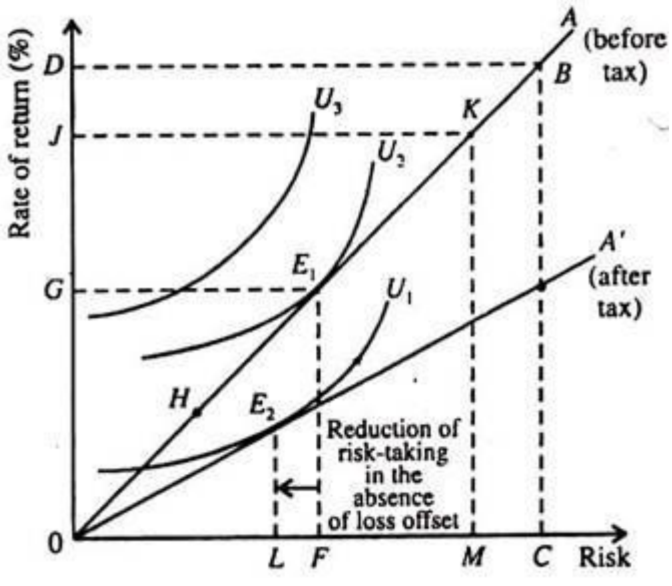


Fig. 19.6 Taxation and Risk Bearing

Successive increases in risk call for rising additions to the rate of return if the investor is to remain equally well-off. This follows from the implicit assumption that the utility of income schedule rises at a decreasing rate as income increases.

Now a 50% tax is imposed and we assume that full loss offset is allowed. If the investor does not change his portfolio mix, he will now find himself with half the risk and half the return than he had before, i.e., in a position similar to that provided by portfolio mix H prior to tax.

Since before the imposition of the tax he could have improved his position by moving from point H to tangency point he will now prefer to move from E_1 to K. At K gross risk and return have doubled but his net risk and return are the same (i.e., what they were at U_2 — before the imposition

of the tax). No doubt his private risk taking has remained unchanged. But total risk taking, as seen from the point of view of the economy as a whole has increased. The reason is that the government has now become a partner. It now takes half the return and assumes half the risk, too. This outcome is conceivable only if loss offset is permitted.

Notes

Without loss offset, the tax would rotate the opportunity line from 0A to 0A' and the new equilibrium would be at a tangency point E_2, with risk taking decreased to 0L.

Under certain conditions, a tax with loss offset will increase risk taking. The investment choice is not just one between cash (assumed to be riskless) and one risky asset. Inflation renders cash holdings risky, and choices among alternative risky assets are to be considered.

The outcome then depends on the precise nature of the investor's preferences or the shape of his indifference curves. The net result may be either to increase or to reduce risk taking — and no simple generalisation regarding the outcome is possible.

5.2. The Portfolio Optimization Approach

Tobin's Portfolio Balance Approach (With Diagram) | Demand for Money

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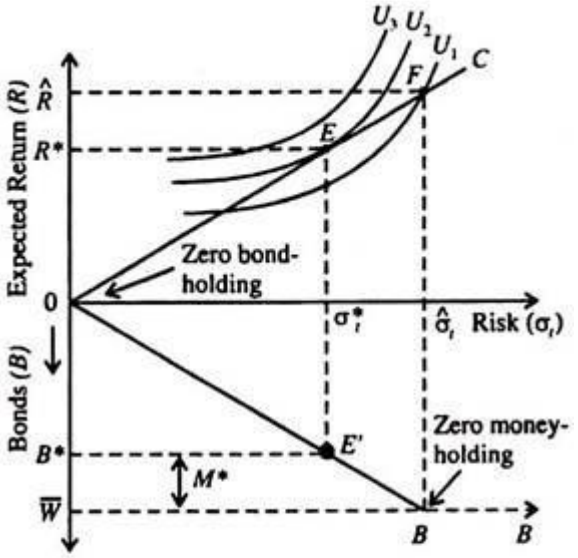


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This portfolio yields a lower level of utility than that represented by bond holdings of B* and money holdings of M*.

The reason is that as the investor moves to the right of point E along the line 0C, the additional return expected from the portfolio by holding more bonds (and less money) is not adequate to compensate the investor for the additional risk (the slope of the line 0C is less than that of the

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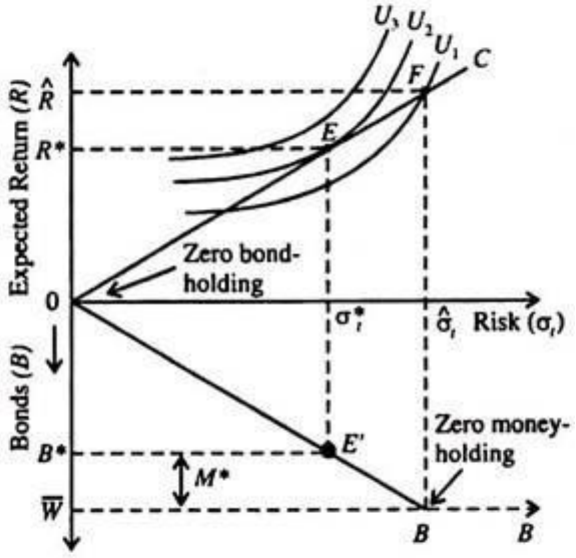


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No financial investment gives a guaranteed rate of return and an individual who buys equity shares undertakes a risk. No investment is a safe bet. In other words, to make an investment is to gamble, and the investors should be interested in the gamble only if the value of probable gain outweighs that of probable losses.

Since an investor's marginal utility of money income falls, an even-money or a fair bet (in which there is fifty-fifty chance of winning or losing) may not always be acceptable. If a tax on investment income worsens the odds by reducing the expected return, investment will fall. But such a tax may not always reduce the odds. It will reduce the investor's return if he wins.

However if a loss offset is allowed for, it will also reduce his loss if he loses. Given a proportional tax, both are equiprobable events. Both probable gains and probable losses will be reduced at the same rate. The tax

may induce an investor either to increase or to reduce his risk-taking — depending on circumstances.

Notes

The possibility of increased risk taking is shown in Fig. 19.6 where the rate of return is measured on the vertical axis and the risk is shown on the horizontal axis. Let us suppose, for the sake of simplicity, that the investor chooses between holding cash (which is completely safe) and a single alternative, say a corporate bond, of given risk.

The opportunity line 0A shows the combinations of risk and return available to him by choosing different mixes of cash and bonds. With 100% cash holding, he will stay at point zero where he assumes no risks and receives no return either. If all his funds are invested in bonds he will move to point B, with risk 0C and return 0D.

Before tax the investor is at point E_1 at which his opportunity line 0A just touches the highest attainable indifference curve U_2. His risk equals 0F and return is 0G. Here the indifference curve is drawn so as to show the increasing risk aversion.

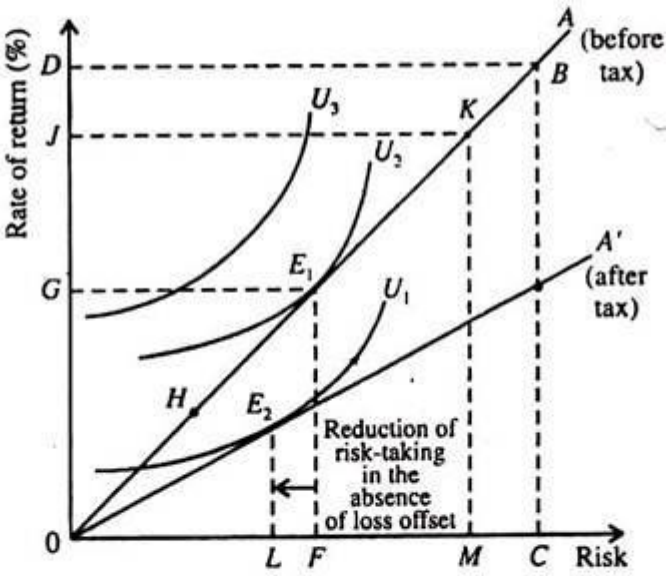


Fig. 19.6 Taxation and Risk Bearing

Successive increases in risk call for rising additions to the rate of return if the investor is to remain equally well-off. This follows from the implicit assumption that the utility of income schedule rises at a decreasing rate as income increases.

Now a 50% tax is imposed and we assume that full loss offset is allowed. If the investor does not change his portfolio mix, he will now find himself with half the risk and half the return than he had before, i.e., in a position similar to that provided by portfolio mix H prior to tax.

Since before the imposition of the tax he could have improved his position by moving from point H to tangency point he will now prefer to move from E_1 to K. At K gross risk and return have doubled but his net risk and return are the same (i.e., what they were at U_2 — before the imposition

of the tax). No doubt his private risk taking has remained unchanged. But total risk taking, as seen from the point of view of the economy as a whole has increased. The reason is that the government has now become a partner. It now takes half the return and assumes half the risk, too. This outcome is conceivable only if loss offset is permitted.

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Without loss offset, the tax would rotate the opportunity line from 0A to 0A' and the new equilibrium would be wwat a tangency point E_2, with risk taking decreased to 0L.

Under certain conditions, a tax with loss offset will increase risk taking. The investment choice is not just one between cash (assumed to be riskless) and one risky asset. Inflation renders cash holdings risky, and choices among alternative risky assets are to be considered.

The outcome then depends on the precise nature of the investor's preferences or the shape of his indifference curves. The net result may be either to increase or to reduce risk taking — and no simple generalisation regarding the outcome is possible.

5.3.Friedman's Restatement of Quantity Theory of Money

Quantity Theory of Money by Friedman

Friedman in his essay, "The Quantity Theory of Money—A Restatement" published in 1956 beautifully restated the old quantity theory of money. In his restatement he says that "money does matter". For a better understanding and appreciation of Friedman's modern quantity theory, it is necessary to state the major assumptions and beliefs of Friedman.

First of all Friedman says that his quantity theory is a theory of demand for money and not a theory of output, income or prices.

Secondly, Friedman distinguishes between two types of demand for money. In the first type, money is demanded for transaction purposes. It serves as a medium of exchange. This view of money is the same as the old quantity theory. But in the second type, money is demanded because it is considered as an asset. Money is more basic than the medium of exchange. It is a temporary abode of purchasing power and hence an asset or a part of wealth. Friedman treats the demand for money as a part of the wealth theory.

Thirdly, Friedman treats the demand for money just like the demand for any durable consumer good.

The demand for money depends on three factors:

(a) The total wealth to be held in various forms

(b) The price or return from these various assets and

(c) Tastes and preferences of the asset holders.

Friedman considers five different forms in which wealth can be held, namely, money (M), bonds (B), equities (E), physical non-human goods (G) and human capital (H). In a broad sense, total wealth consists of all types of

Notes

"income". By "income" Friedman means "aggregate nominal permanent income" which is the average expected yield from wealth during its life time.

The wealth holders distribute their total wealth among its various forms so as to maximise utility from them. They distribute the assets in such a way that the rate at which they can substitute one form of wealth for another is equal to the rate at which they are willing to do.

Accordingly the cost of holding various assets except human capital can be measured by the rate of interest on various assets and the expected change in their prices. Thus Friedman says there are four factors which determine the demand for money. They are: price level, real income, rate of interest and rate of increase in the price level.

The demand for money is unitarily elastic. The relationship between the demand for money and real income (output of goods and services) is also direct. But it is not proportional as in the case of price. Thus while changes in the price level cause direct and proportional changes in the demand for money, changes in real income create direct but more than proportional changes in the demand for money.

The rate of interest and the rate of increase in the price level constitute the cost of holding cash balances. If money is kept in the form of cash, it does not earn any income. But if the same money is lent out, it could earn some income in the form of interest to the owner.

The interest is the cost of holding cash. At higher interest rate the demand for money would be less. On the other hand, a lower rate of interest creates an increase in the demand for money. Thus there is an inverse relationship between the rate of interest and the demand for money.

The rate of increase in the price level also influences the demand for money. There is an inverse relationship between the rate of increase in the price level and the demand for money. When the price level increases at a high rate, the cost of holding money will increase.

The people would like to hold smaller cash balances. The demand for money will decline. On the other hand when the price level increases at a low rate, the cost of holding money will decline and the demand for money increases.

Fourthly, Friedman believes that each form of wealth has its own characteristics and a different yield or return. In a broad sense money includes currency, demand deposits and time deposits which yield interest. Money also yields real return in the form of convenience, security etc., to the holder which is measured in terms of price (P). When the price level falls, the rate of return on money is positive because the value of money increases. When the price level rises, the value of money falls and the rate of return is negative. Thus P is an important variable in the demand function of Friedman.

The rate of return on bonds, equities and physical assets consists of currently paid interest rate and changes in their prices. As far as human wealth is concerned it is very difficult to measure the conversion of human into non-human wealth due to institutional constraints. But there is some possibility of substituting human wealth for non-human wealth.

Freidman calls the ratio of non-human wealth to human wealth or ratio of wealth to income as W. According to Friedman, income elasticity of demand for money is greater than unity. Besides, there are certain variables like the tastes and preferences of the wealth holders which also affect the demand functions. These variables are represented by m.

Friedman's Demand Function:

On the basis of the above assumptions and formulations, Friedman has derived a demand function for an individual wealth holder.

It may be symbolically expressed as

$$M = f\left[p, r_b - \frac{1}{r_b}\cdot\frac{dr_b}{dt}; r_e + \frac{1}{p}\cdot\frac{dp}{dt} - \frac{1}{r_e}\frac{dr_e}{dt}; \frac{1}{p}\cdot\frac{dp}{dt}; w; y; m\right] \quad ...(1)$$

Where M is the total demand for money, P is the general price level,

r_b is the market interest rate on bonds,
r_e is the market interest rate on equities,
1/p. dp/dt is the nominal return from physical goods,

W is the ratio of non-human to human wealth,

Y is the money income available to the wealth holder,

m is the variables affecting tastes and preferences on the wealth holders.

By assuming rb and re to be stable, Friedman replaces the variables representing the return on bonds and equities

$$\left[r_b, \frac{1}{r_b}\cdot\frac{dr_b}{dt}\right] + \left[r_e + \frac{1}{p}\cdot\frac{dp}{dt}\frac{1}{r_b}\cdot\frac{dr_e}{dt}\right]$$

in equation I by simply r_b and r_e. As a result of this replacement, the demand function can be written as

$$M = f\left(P, r_b; r_e; \frac{1}{P}\cdot\frac{dp}{dt} w; y; \mu\right) \quad ...(2)$$

Further Friedman says that when there are changes in price and money income, there will be a proportionate change in the demand for money. This means that equation 2 must be regarded as homogenous of the first degree in P and Y, so that equation 2 becomes as

Notes

$$IM = f\left(\lambda P, r_b; r_e; \frac{1}{P}.\frac{dp}{dt} w; \lambda y; \mu\right) \quad ...(3)$$

putting $\lambda = \frac{1}{P}$

equation 3 can be written as

$$\frac{M}{P} = f\left(r_b; r_e \frac{1}{P}.\frac{dp}{dt}; w \frac{Y}{P}; \mu\right) \quad ...(4)$$

In this form, the equation 4 expresses the demand for real cash balances as a function of "real" variable.

Putting $\lambda = \frac{1}{Y}$ equation 3 can be written as

$$\frac{M}{Y} = f\left(r_b; r_e \frac{1}{P}.\frac{dp}{dt}; w; \frac{P}{y}; \mu\right) \quad ...(5)$$

or

$$M = f\left(r_b; r_e \frac{1}{P}.\frac{dp}{dt}; w; \frac{P}{y}; \mu\right) Y \quad ...(6)$$

In Friedman's modern quantity theory of money, the supply of money is independent of demand for money. Due to the actions of the monetary authorities, the supply of money changes, whereas the demand for money remains more or less stable. It means that the amount of money which people want to have as cash or bank deposits is more or less fixed to their permanent income.

If the central bank purchases securities, people who sell securities to the central bank receive money and this leads to an increase in their cash holdings. The people will spend this excess money partly on consumer goods and partly by purchasing assets. This spending will reduce their cash balances and at the same time there is a rise in the national income.

On the other hand, when the central bank sells securities, the money holding of the people reduces, in relation to their permanent income. Therefore, they will try to increase their cash partly by reducing their consumption and partly by selling their assets. This will reduce national income. Thus in both cases the demand for money remains stable.

If the demand for money is given, it is possible to predict the effects of changes in the supply of money on expenditure and income. If the economy is at less than full employment level, an increase in the supply of money raises the expenditure, output and employment levels. But this is possible only in the short run.

Friedman's quantity theory of money can be explained diagrammatically in the following figure (fig.10):

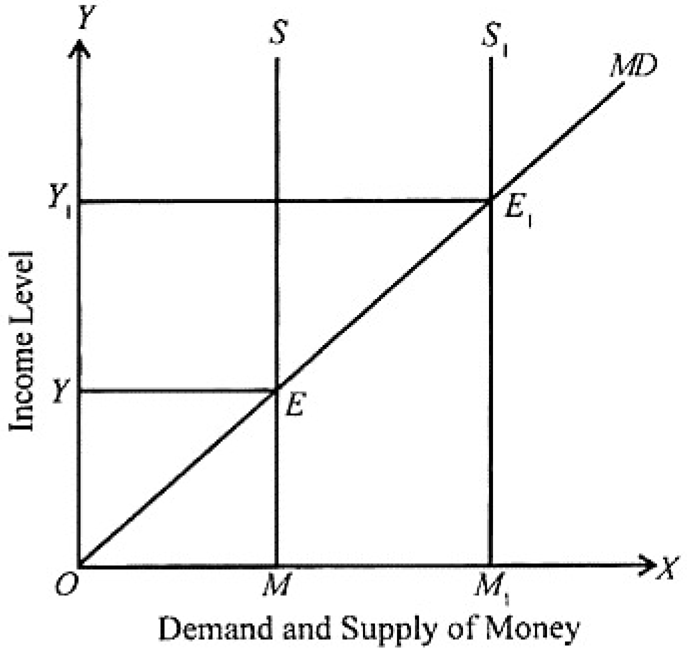


Fig. 10.

In the figure while the X-axis shows the demand and supply of money, Y-axis measures the income level. MD is the demand curve for money which changes along with income. MS is the supply curve for money. These two curves intersect at point E and the equilibrium income level OY is determined. If there is an increase in money supply, the supply curve shifts to M_1S_1. At this level the supply is greater than demand and a new equilibrium is established at E_1. At the new equilibrium level the income increases to OY_1.

Permanent Income Hypothesis:

Friedman gave the Permanent Income Hypothesis as an explanation of the short and long period consumption function. According to him, there is no tendency for the proportion of income saved to increase at higher income levels. He rejects the use of "current income" as the determinant of consumption expenditure. He divides consumption and income into "permanent" and "transitory" components, so that

Ym = Yp + Yt and

Cm =Cp + Ct

where Y stands for income, C stands for consumption and m,p and t stand for their measured , permanent and transitory components.

Permanent income is to be defined as the means of income which is regarded as permanent by the consumer. It depends on time-horizon and farsightedness. It includes non-human wealth like personal attributes of the earners. Y being the measured income or current income, it may be larger or smaller than his permanent income in any period.

The differences between measured and permanent income are due to the transitory component of income (Yt). The transitory income may rise or fall depending on cyclical variations. If the transitory income is positive, the measured income will be higher than the permanent income; if it is negative

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it will be lower than the permanent income. The transitory income can also be zero in which case measured income equals permanent income.

Permanent consumption is the amount planned to consume in a given period. Measured consumption is divided into permanent consumption (Cp) and transitory consumption (Ct). Measured consumption may be more than permanent consumption if the transitory consumption is positive. It will be less than permanent consumption if the transitory consumption is negative and it will be equal to permanent consumption if the transitory consumption is zero.

Permanent consumption is a multiple (K) of permanent income Yp

$$Cp = KYp$$

$$\text{and } K = f(r,w,u)$$

$$\text{Therefore } Cp = K(r,w,u,)Yp$$

where K is the function of the rate of interest (r), the ratio of income to wealth (w), and the consumer's propensity to consume (u). This equation tells us that in the long period consumption increases in proportion to change in Yp. Thus K is the permanent average propensity to consume. Friedman contended that the secular decline in (r) since 1920s has tended to raise the value of K. But there has been a long run decline in wealth (w) which tends to reduce the value of K.

Three factors have said to influence the propensity to consume.

Firstly, there has been a deep decline in farm population increasing consumption with urbanisation and ultimately increasing K.

Secondly, there has been a sharp decline in the size of the families leading to more saving and less consumption and reducing the value of K.

Thirdly, the large provision of social security reduced the need for keeping more savings. It has increased the propensity to consume resulting in a higher value of K. The cumulative effect of all these factors is to raise consumption in proportion to the change in the permanent income component.

The relationship between the permanent and transitory components of income and consumption are based on the following assumptions:

1. There is no correlation between transitory and permanent income.

2. There is no correlation between permanent and transitory consumption.

3. There is no correlation between transitory consumption and transitory income.

4. The differences in permanent income alone affect consumption.

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The Permanent Income Hypothesis can be diagrammatically depicted Fig. 11:

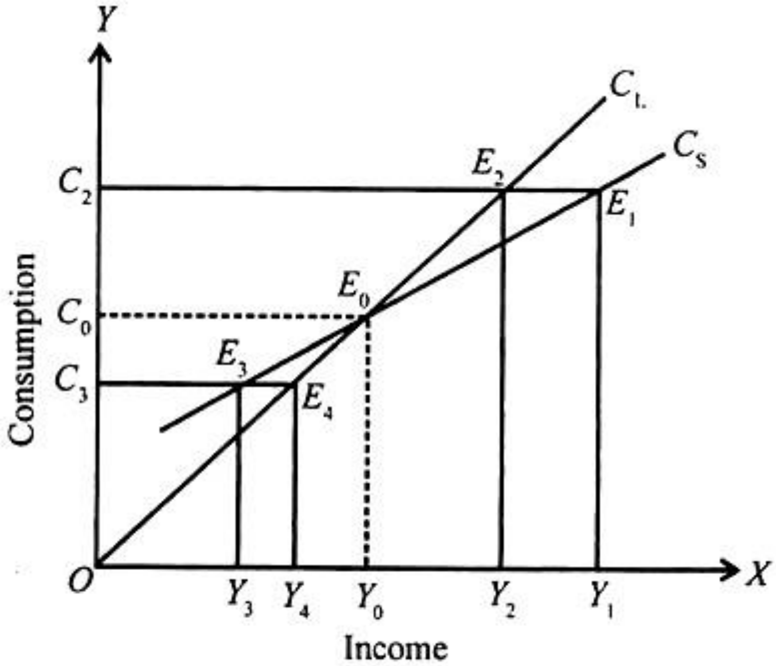


Fig. 11.

X axis measures income and Y axis consumption. CI is the long run consumption function and Cs is the short run consumption function. At OY_0 income level Cs and CI coincide at E_0. At this point changes in permanent income and measured income (i.e., current income) are identical. So are permanent and measured consumption as shown by OCo. If we move to the left of point E_0 on the Cs curve at $E_{3,}$ the measured income declines to OY_3 due to negative transitory income component.

As the permanent income OY_4 is higher than the measured income OY_3permanent consumption will remain at OC_3 (= Y_4 E_4) and will also equal to measured consumption (Y_3E_3 = Y_4E_4). Thus when permanent income is less than one it is possible for measured consumption Y_3E_3 to be higher than measured income OY_3 because of the stability of permanent income. This generally keeps the measured consumption static.

On the other hand a movement to the right of point E_0 on the Cs Curve at E_1, Shows the measured income to be OY_1. Here the measured consumption is OC, (=Y_1E_1). But OC_2 (=E_2Y_2) level of consumption can be maintained permanently at the permanent income level OY_2. Thus Y_1 Y_2 is the positive transitory income component of measured income OY_1, which is higher than the permanent income OY_2.

The Permanent Income Hypothesis of Friedman is consistent with cross-section budget data. It suggests that current consumption or measured consumption will tend to be high during recession and low during boom period.

Criticism:

Friedman's Permanent Income Hypothesis is criticised on the following grounds:

Firstly, Friedman's assumption that there is no connection between transitory components of consumption and income is not real. This

assumption says that when measured income increases or decreases it does not affect consumption but it does affect only savings. But this is very much contrary to the natural behaviour of the consumers.

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A person who have windfall gain does not deposit the entire amount in the bank but enjoys a whole or part of it in current consumption. Similarly a person who has met with a loss would definitely reduce or postpone his consumption than rush to the bank to withdraw the amount to meet his requirements.

Secondly, Friedman's hypothesis states that the APC of all families,whether rich or poor is the same in the long run. But this is not true. The consumption of low income families is higher relative to their incomes and the saving of high income families is higher relative to their incomes. Even among the persons with level of permanent income same saving and consumption differ.

Thirdly, the usage of terms like 'permanent, 'transitory' and 'measured' have tended to affect the clarity of the theory. The concept of measured income creates confusion by mixing with permanent and transitory income on the one hand and permanent and transitory consumption on the other.

Fourthly, the distinction between human and non-human wealth is sadly missing in Friedman's theory.

In-spite of all these weaknesses it can be fairly concluded with the words of Micheal Evans "that the evidence supports this theory", and that Friedman's formulation has reshaped and redirected much of the research on the consumption function.

Milton Freidman Hypothesis:

Milton Freidman and L.J. Savage in their well- known article put forward a hypothesis that explains why the same group of people buy insurance and also engage in gambling. In buying insurance they seek to avoid risk and in engaging gambling they take risk. This seemingly contradictory behaviour on the part of the people could not be explained with Bernoullian Hypothesis of diminishing marginal utility of money.

Freidman and Savage abandoned this hypothesis of diminishing marginal utility of money for all ranges of income and instead adopted another hypothesis. According to Freidman-Savage hypothesis, for most people, marginal utility of money income diminishes up to a certain level of money income, it increases from that level to a certain higher level of money income and then beyond that level it again diminishes.

With this hypothesis both types of behaviour of buying insurance to avoid risk and of indulging in gambling and thereby to take risks are explained. Freidman-Savage hypothesis is depicted in the Figure (Fig.12). The curve of marginal utility of money income has three segments over LM, (that is, up to income level OY_1), marginal utility of money income diminishes, segment MN (that is, between income level Y_1 and Y_2) where

marginal utility of money income rises and segment NH (that is, income higher than OY_2) where marginal utility of money income again diminishes. Segment LM represents marginal utilities of money income at lower level, range MN represents marginal utilities of money income at middle range and segment NH represents marginal utilities of money income at higher level.

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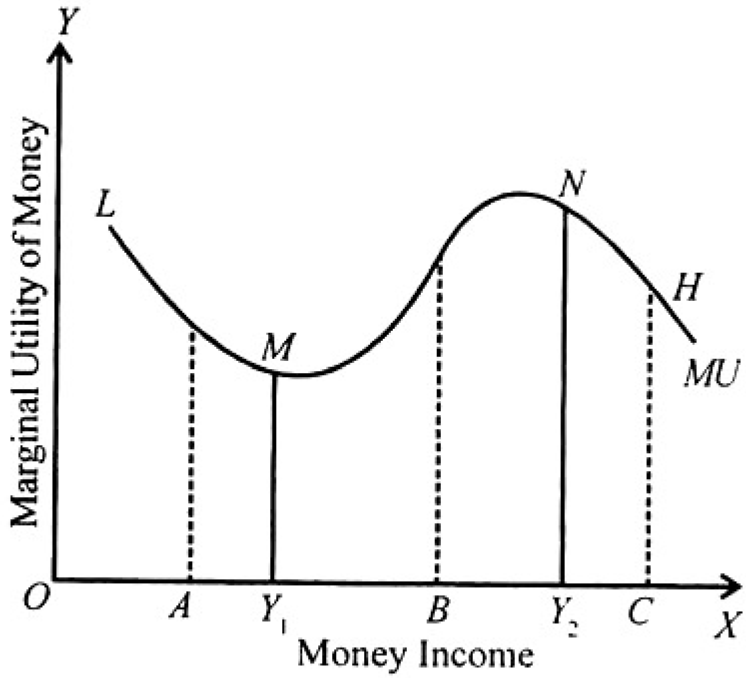


Fig. 12.

Suppose an individual has an income OA which lies in the first segment of diminishing marginal utility of income. Such an individual would be induced to buy insurance and thereby avoid risk, since the payment (insurance premium) is small as compared with the loss of utility he would suffer without insurance.

The loss of utility is very large for the marginal utility of money to the left of A is higher. With such an income individual will be unwilling to take risks in a gamble or risky investment, since the gain in utility from any income will be smaller than the loss of utility from it.

Now suppose the individual's income is OB which lies in the middle income segment MN where the marginal utility of money income is increasing. With OB income, the individual will be willing to buy lottery tickets, indulge in gambling or undertake risky investment since the gain in utility from extra money will be much greater (marginal utility of money income is rising) than the loss of utility from the small payment for a lottery ticket or from equal monetary loss in a gamble.

A person with an income beyond Y_2 in the segment MH enjoys quite high income and therefore marginal utility of money to him is declining. As a result of this he would be unwilling to take risk either in a gamble or in undertaking risky investment except at very favourable odds.
Freidman-Savage think that the curve of marginal utility of money indicates the behaviour or attitude of people in different socio-economic groups. They of course admit that there are many differences between the persons within a

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same socio-economic group; some have great preference for gambling and others are unwilling to take any risk at all. Even then Freidman and Savage think the curve described the propensities of broad classes.

The middle group with increasing marginal utility of money is those, they argue, who are eager to take risks to improve themselves. The expectation of more money means much to this group of persons; if their efforts succeed, they will lift themselves up into the next socio-economic class. These persons want not just more consumer goods; they look up in the social scale. They want to rise, to change the pattern of their lives. No wonder that marginal utility of money increases for them.

According to Friedman, the Great Depression of 1930s should be called the 'Great Contraction'. He has analysed the trend between 1928-1933 and explained that the Federal Reserve System bears the main responsibility for the Great Depression.

The sharp and unprecedented decline in the stock of money was a consequence of the monetary authority's failure to provide the liquidity that would have enabled the banks which were failing to meet their obligation. Friedman has pointed out that perhaps the most remarkable feature of the record is the adaptability and flexibility that the private economy has so frequently shown under such extreme provocation.

Friedman along with A J. Schwartz has written a book entitled A Monetary History of the United States, 1867-1960. Here they have analysed the America's economic history. In his another book titled. A Programme for Monetary Stability he points out that for effective and successful operation of a private market economy, a stable monetary framework is essential. Friedman is an uncompromising supporter of the free market mechanism. This world renowned economist has 23 books and 40 papers to his credit.

5.5.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What are the **demand for money depends on three factors?**

……………………………………

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) Define DemandFunction

6.Answer to check your progress Questions.

1. The demand for money depends on three factors:

(a) The total wealth to be held in various forms

(b) The price or return from these various assets and

(c) Tastes and preferences of the asset holders.

2. **For instance, the money demand function may be expressed as:**

$(M/P)_d = f(r_s, r_b, \pi^e, W)$

where r_s = the expected real return on stock, r_b = the expected real return on bonds, π^e = the expected inflation rate and W= real wealth. An increase in r_s or r_b reduces money demand, because other assets become more attractive. An increase in n^e also reduces money demand, because money becomes less attractive. An increase in W raises money demand, because higher wealth means a larger portfolio.

It is against this backdrop that we study the portfolio theory of money demand.

5.7.Summary

In this unit you have learnt about the meaning of Tobin's Theory of Speculative Demand for Money and the Portfolio Optimization Approach .This knowledge would make you understand what is Tobin's Theory of Speculative Demand for Money and the Portfolio Optimization Approach and how it can be worked in theMonetary economics. The concept Friedman's Restatement of Quantity Theory of Money such as would have made you to distinguish the activites form the supply of money activities and you might have learnt about the meaning and its approaches in the transaction demand for money.

5.8.Key words

Permanent Income Hypothesi, Loss Offset and the Return to Risk

5.9.Self Assessment Questions and Exercises.

Short Answer Questions

1. Define Demand Function?

2. What are the demand for money depends on three factors?

Long answer Questions.

1.Explain the Tobin's Theory of Speculative Demand for Money and the Portfolio Optimization Approach

2.State Friedman's Restatement of Quantity Theory of Money

5.10.Further Readings

Laidler, David (1993), **"The Demand for Money",** 4th edition. Harper Collins,New

York.

Notes

UNIT-6: SUPPLY OF MONEY:

6.1.Financial Intermediaries and the Supply of Money

What is a Financial Intermediary

A financial intermediary is an entity that acts as the middleman between two parties in a financial transaction, such as a commercial bank, investment banks, mutual funds and pension funds. Financial intermediaries offer a number of benefits to the average consumer, including safety, liquidity, and economies of scale involved in commercial banking, investment banking and asset management. Although in certain areas, such as investing, advances in technology threaten to eliminate the financial intermediary, disintermediation is much less of a threat in other areas of finance, including banking and insurance.

Financial Intermediary

A non-bank financial intermediary does not accept deposits from the general public. The intermediary may provide factoring, leasing, insurance plans or other financial services. Many intermediaries take part in securities exchanges and utilize long-term plans for managing and growing their funds. The overall economic stability of a country may be shown through the activities of financial intermediaries and growth of the financial services industry.

Functions of Financial Intermediaries

Financial intermediaries move funds from parties with excess capital to parties needing funds. The process creates efficient markets and lowers the cost of conducting business. For example, a financial advisor connects with clients through purchasing insurance, stocks, bonds, real estate, and other assets. Banks connect borrowers and lenders by providing capital from other financial institutions and from the Federal Reserve. Insurance companies collect premiums for policies and provide policy benefits. A

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pension fund collects funds on behalf of members and distributes payments to pensioners.

Mutual Funds as Financial Intermediaries

Mutual funds provide active management of capital pooled by shareholders. The fund manager connects with shareholders through purchasing stock in companies he anticipates may outperform the market. By doing so, the manager provides shareholders with assets, companies with capital and the market with liquidity.

Benefits of Financial Intermediaries

Through a financial intermediary, savers can pool their funds, enabling them to make large investments, which in turn benefits the entity in which they are investing. At the same time, financial intermediaries pool risk by spreading funds across a diverse range of investments and loans. Loans benefit households and countries by enabling them to spend more money than they have at the current time.

Financial intermediaries also provide the benefit of reducing costs on several fronts. For instance, they have access to economies of scale to expertly evaluate the credit profile of potential borrowers and keep records and profiles cost-effectively. Last, they reduce the costs of the many financial transactions an individual investor would otherwise have to make if the financial intermediary did not exist.

Example of a Financial Intermediary

In July 2016, the European Commission took on two new financial instruments for European Structural and Investment (ESI) fund investments. The goal was creating easier access to funding for startups and urban development project promoters. Loans, equity, guarantees and other financial instruments attract greater public and private funding sources that may be reinvested over many cycles as compared to receiving grants.

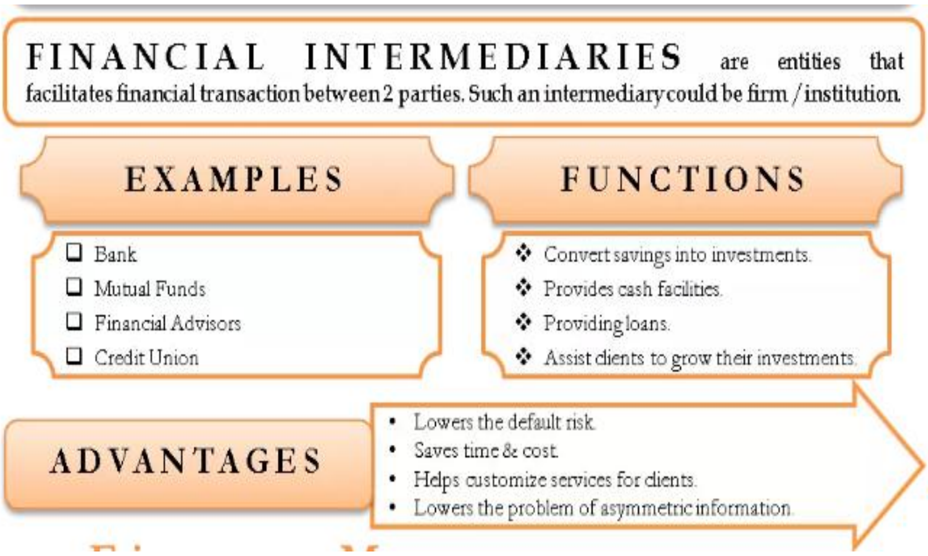
One of the instruments, a co-investment facility, was to provide funding for startups to develop their business models and attract additional financial support through a collective investment plan managed by one main financial intermediary. The European Commission projected the total public and private resource investment at approximately $16.5 million per small- and medium-sized enterprise.

6.2.The Nature and Functions of Financial Intermediaries

A financial intermediary is an entity that facilitates a financial transaction between two parties. Such an intermediary or a middleman could be a firm or an institution. Some examples of financial intermediaries are banks, insurance companies, pension funds, investment banks and more.

One can also say that the primary objective of the financial intermediaries is to channel savings into investments. These intermediaries charge a fee for their services.
Financial intermediaries have emerged as a useful tool for the efficient market system as they help channelize savings into investment. However,

they can also be a cause of concern, as the sub-prime crisis shows. Often, there is a need to regulate the activities of these intermediaries.



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EXAMPLES OF FINANCIAL INTERMEDIARIES

Bank: These intermediaries are licensed to accept deposits, give loans and offer many other financial services to the public. They play a major role in the economic stability of a country, and thus, face heavy regulations.
Mutual Funds: They help pool savings of individual investors into financial markets. A fund manager oversees a mutual fund and allocates the funds to different investment products.
Financial advisors: Such intermediaries may or not offer a financial product, but advises investors to help them achieve their financial objectives. These advisors usually undergo special training.
Credit Union: It is also a type of bank, but works to serve its members and not public. They may or may not operate for profit purposes.
Other financial intermediaries are pension funds, insurance companies, investment banks and more.

FUNCTIONS OF FINANCIAL INTERMEDIARIES

A financial intermediary performs the following functions:

- As said before, the biggest function of these intermediaries is to convert savings into investments.
- Intermediaries like commercial banks provide storage facilities for cash and other liquid assets, like precious metals.
- Giving short and long term loans is a primary function of the financial intermediaries. These intermediaries accept deposits from the entities with surplus cash and then loan them to entities in need of funds. Intermediaries give the loan at interest, part of which is given to the depositors, while the balance is retained as profits.
- Another major function of these intermediaries is to assist clients to grow their money via investment. Intermediaries like mutual funds and investment banks use their experience to offer investment products to help their clients maximize returns and reduce risks.

ADVANTAGES OF FINANCIAL INTERMEDIARIES

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- They help in lowering the risk of an individual with surplus cash by spreading the risk via lending to several people. Also, they thoroughly screen the borrower, thus, lowering the default risk.
- They help in saving time and cost. Since these intermediaries deal with a large number of customers, they enjoy economies of scale.
- Since they offer a large number of services, it helps them customize services for their client. For instance, banks can customize the loans for small and long term borrowers or as per their specific needs. Similarly, insurance companies customize plans for all age groups.
- They accumulate and process information, thus lowering the problem of asymmetric information.

Let us consider a simple example that will help us understand these advantages better. Suppose you need some loan, but you don't know who has enough money to give you. So, you contact a middleman, who in turn is in contact with those with surplus money.

A POTENTIAL ISSUE WITH INTERMEDIARIES

It is possible that a financial intermediary may not spread risk. They may channel depositor's funds to schemes that earn them (intermediaries) more profits. Or, due to poor management, they may invest money in schemes, which may not be so attractive now.

Such issue (or issues) with the intermediaries, however, are avoidable. Moreover, after the 2008 crisis, financial intermediaries are facing increased regulations to ensure that they don't overreach their limits.

It is clear that financial intermediaries play a very important role in the economic development of the country. They play even bigger role in the developing countries, including helping the government to eliminate poverty and implement other social programs.

6.3.The Supply of Money

What is Supply of Money?

The money supply is the entire stock of currency and other liquid instruments circulating in a country's economy as of a particular time. The money supply can include cash, coins, and balances held in checking and savings accounts, and other near money substitutes. Economists analyze the money supply as a key variable to understanding the macroeconomy and guiding macroeconomic policy.

KEY TAKEAWAYS

- Money Supply is the total quantity of money in circulation at a point in time.
- Changes in the money supply are closely watched because of the relationship between money and macro economic variables such as inflation.

- The money supply can be measured in a various ways using narrower or broader definitions of which classes of financial assets are considered to be money.

Understanding Money Supply

Economists analyze the money supply and develop policies revolving around it through controlling interest rates and increasing or decreasing the amount of money flowing in the economy. Public and private sector analysis is performed because of the money supply's possible impacts on price level, inflation, and the business cycle. In the United States, the Federal Reserve policy is the most important deciding factor in the money supply. The money supply is also known as the money stock.

Effect of Money Supply on the Economy

An increase in the supply of money typically lowers interest rates, which in turn, generates more investment and puts more money in the hands of consumers, thereby stimulating spending. Businesses respond by ordering more raw materials and increasing production. The increased business activity raises the demand for labor. The opposite can occur if the money supply falls or when its growth rate declines.

Change in the money supply has long been considered to be a key factor in driving macroeconomic performance and business cycles. Macroeconomic schools of thought that focus heavily on the role of money supply include Irving Fisher's Quantity Theory of Money, Monetarism, and Austrian Business Cycle Theory.

Historically, measuring the money supply has shown that relationships exist between it and inflation and price levels. However, since 2000, these relationships have become unstable, reducing their reliability as a guide for monetary policy. Although money supply measures are still widely used, they are one of a wide array of economic data that economists and the Federal Reserve collects and reviews.

How Money Supply is Measured

The various types of money in the money supply are generally classified as Ms, such as M0, M1, M2 and M3, according to the type and size of the account in which the instrument is kept. Not all of the classifications are widely used, and each country may use different classifications. The money supply reflects the different types of liquidity each type of money has in the economy. It is broken up into different categories of liquidity or spendability.

M0 and M1, for example, are also called narrow money and include coins and notes that are in circulation and other money equivalents that can be converted easily to cash. M2 includes M1 and, in addition, short-term time deposits in banks and certain money market funds. M3 includes M2 in addition to long-term deposits. However, M3 is no longer included in the reporting by the Federal Reserve. MZM, or money zero maturity, is a measure that includes financial assets with zero maturity and that are immediately redeemable at par. The Federal Reserve relies heavily on MZM data because its velocity is a proven indicator of inflation.

Notes

Money supply data is collected, recorded and published periodically, typically by the country's government or central bank. The Federal Reserve in the United States measures and publishes the total amount of M1 and M2 money supplies on a weekly and monthly basis. They can be found online and are also published in newspapers. According to data from the Federal Reserve, as of March 2019 a little over $3.7 trillion in M1 money was in circulation, while almost $14.5 trillion in M2 money was circulating in the United States.

6.4.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is financial intermediary?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What means Supply of money**?**

6.5.Answer to check your progress Questions.

1. **Financial Intermediary**

A non-bank financial intermediary does not accept deposits from the general public. The intermediary may provide factoring, leasing, insurance plans or other financial services. Many intermediaries take part in securities exchanges and utilize long-term plans for managing and growing their funds. The overall economic stability of a country may be shown through the activities of financial intermediaries and growth of the financial services industry.

2. **What is Supply of Money?**

The money supply is the entire stock of currency and other liquid instruments circulating in a country's economy as of a particular time. The money supply can include cash, coins, and balances held in checking and savings accounts, and other near money substitutes. Economists analyze the money supply as a key variable to understanding the macroeconomy and guiding macroeconomic policy.

6.6.Summary

In this unit you have learnt about the meaning of Nature and Functions of Financial Intermediaries and The Supply of Money .This knowledge would make you understand what is Nature and Functions of Financial Intermediaries and The Supply of Money Approach and how it can be worked in the Monetary economics. The concept Nature and Functions of Financial Intermediaries and The Supply of Money such as would have made you to distinguish the activites form the supply of money activities and you might have learnt about the meaning and its approaches in the transaction supply of money.

Notes

6.7.Key words

financial intermediary, money supply

6.8.Self Assessment Questions and Exercises.

Short Answer Questions

1.What is financial intermediary?
2. What is Supply of Money?

Long answer Questions.

1.Detail the Financial Intermediaries and the Supply of Money.

2. Explain the Nature and Functions of Financial Intermediaries and The Supply of Money

6.9.Further Readings

Chandler, L.V (1977), "**Economics of Money and Banking**", S.Chand Ltd, New Delhi.

UNIT-7: Non-Banking Financial Intermediaries

Notes

7.1. Non-Banking Financial Intermediaries

NBFIs: Non-Bank Financial Intermediaries

Non-Bank Financial Intermediaries (NBFIs) is a heterogeneous group of financial institutions other than commercial and co-operative banks. They include a wide variety of financial institutions, which raise funds from the public, directly or indirectly, to lend them to ultimate spenders.

The development banks (such as the IDBI, IFCI, IGICI, SFCs, land development banks, etc.). They specialise in making term loans to their borrowers. Three other all-India big term-lending institutions are the LIC, the GIC and its subsidiaries, and the UTI. Of these, only the UTI is a pure NBFI, the others raise funds as premia from the sale of insurance. Then, there are provident funds and post offices that mobilise public savings in a big way for onward transmission to ultimate spenders.

A large number of these institutions are public-sector undertakings. Besides them, there is a large number of small NBFI, such as investment companies, loan (or finance) companies, hire- purchase finance companies and the equipment leasing companies which are private sector companies, with only a few exceptions.

Then, there are also specialised finance corporations for providing finance for only one specific economic activity. The important examples are Rural Electrification Corporation, Housing and Urban Development Corporation (HUDCO), Housing Development Finance Corporation (HDFC) and Film Finance Corporation.

In the USA and the UK the NBFIs have made phenomenal progress after the First World War. They compete vigorously with banks for the

public's savings and as sources of finance to deficit spenders. In India their progress is more recent and that, too, with a lot of initiative from the government and the RBI.

They fill important gaps in the financial structure of India's economy and have come to play an important role in the industrial as well as agricultural development of the economy. There is still vast scope as well as need for growth of the existing NBFIs and improvement in their organization and working and for promoting new types of NBFIs, especially those that specialise in the provision of mortgage finance for residential houses, like the building societies in the UK or the savings and loan associations in the USA which, unlike the HUDCO and the HDFC, mobilise directly the savings of the public for housing finance.

7.2.The Classical System and the Neutrality of Money

The classical theory of output and employment is that changes in the quantity of money affect only nominal variables (i.e. money wages, nominal GNP, money balances), and have no influence whatsoever on the real variables of the economy such as real GNP (i.e. output of goods and services produced), level of employment (i.e. number of labour – hours or number of workers employed), real wage rate (i.e. wage rate in terms of its purchasing power).

Actually, according to classical theory, the nominal variables move in proportion to changes in the quantity of money, while real variables such as GNP, employment, real wage rate, real rate of intrest remain unaffected.

Classical economists explained that real variables such as GNP, employment, real wage rate are determined by real factors such as stock of capital, the state of technology, marginal physical product of labour, households' preferences regarding work and leisure.

In the classical model based on flexibility of prices and wages, changes in money supply only affect the price level and nominal magnitudes (i.e. money wages, nominal interest rate, while the real variables such as levels of labour employment and output, saving and investment, real wages, real rate of interest remain unaffected. This independence of real variables from changes in money supply and nominal variables is called classical dichotomy.

Notes

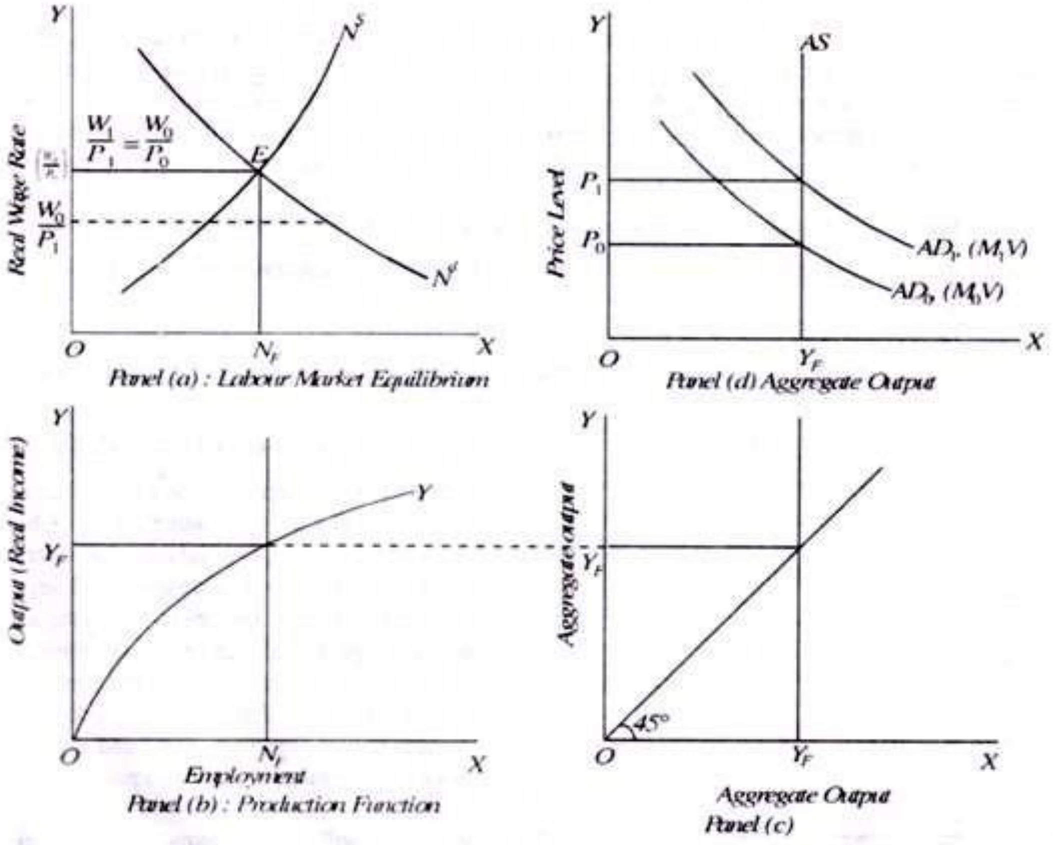


Fig. 3.7. Determination of Income and Employemnt : Complete Classial Model

The neutrality of money can be graphically illustrated with the help Fig. 3.7 and 3.8. Suppose to begin with, the stock of money in the economy is equal to M_0. With this, as will be seen from Panel (d) of Figure 3.7, aggregate demand curve for output is AD_0 which with interaction with aggregate supply curve AS determines price level P_0. Given the price level P_0, labour-market equilibrium determines money wage rate W_0 and real wage rate equal to W_0 / P_0 and level of employment N_F in Panel (a) of Fig. 3.7. The level of employment N_F given the production function, determines aggregate output Y_F. in Panel (b) of Fig. 3.7.

Now suppose there is expansion in money supply from M_0 to M_1 which causes an upward shift in the aggregate demand curve from AD_0 to AD_1 [see Panel (d) of Fig. 3.7], As a result of this upward shift in the aggregate demand curve from AD_0 to AD_1 price level rises from P_0 to P_1 Now, as will be seen from Panel (a) of Fig. 3.7, with money wage rate W_0 and price level equal to P_1, real wage rate falls to W_0/ P_1 at which demand for labour exceeds supply of labour. This will cause, according to classical theory, money wage rate to rise to W_1 in equal proportion to the rise in price level so that real wage is restored to the original level ($W_1/P_1 = W_0/P_0$) and labour-market equilibrium determines the original level of employment $N_{1.}$

With the same level of labour employment aggregate output (i.e. GNP) will not be affected. Thus, we see that with the expansion in money supply, nominal wage rate and price level have risen, but real wage rate, level of employment and output remain constant. Hence it shows that money is neutral in its effect on real variables.

Notes

Changes in Money Supply, Saving-Investment Equilibrium and Neutrality of Money:

According to the classical theory, money performs the function of merely a medium of exchange of goods and services and is therefore demanded only for transaction purposes. This means alternative to holding money is the purchase of goods and services.

Therefore, demand for and supply of money in the classical system does not determine the rate of interest. When the quantity of money increases, it will leave the real rate of interest unchanged and hence the amount of output saved and allocated to investment (i.e., real saving and investment) will remain the same as shown in Fig. 3.8.

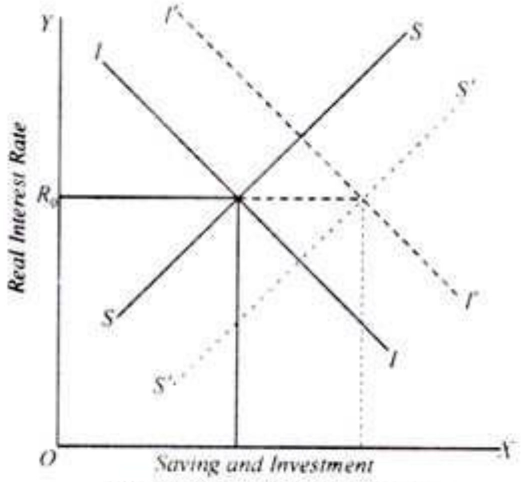


Fig. 3.8. *Capital Market Equilibrium*

This means the increase in money supply does not disturb the capital market equilibrium or saving-investment equality and consequently the continuation of full-employment equilibrium. However, it may be noted that the higher level of prices of commodities would mean that investment expenditure in money terms will increase in the same proportion as the rise in prices even though the output of commodities allocated for investment purposes remains the same.

But this increase in monetary expenditure for investment is matched by the equal increase in monetary saving brought about by the rise in prices. The higher prices of commodities also mean a proportionate increase in the amount of money received from the sale of commodities so that savers are willing to provide proportionately larger amount of saving at a given rate of interest.

Thus, with the increase in quantity of money, the supply curve of nominal saving and investment demand curve will shift to the right as shown by dotted S'S' and IT curves by the same proportion so that the same real rate of interest is maintained and the same amounts of real saving and investment in terms of commodities are made at the higher price level.

A serious limitation of the classical concept of neutrality of money may be noted. As seen above, the neutrality of money is a basic result reached in the classical full-employment model based on flexibility of prices

Notes

and wages. If increase in money supply and consequent rise in prices has no real effects, then inflation would not be a matter of concern.

However, we know that inflation is a matter of serious concern as it lowers standards of living of the people and also adversely affects economic growth. Therefore, efforts are made to control inflation and achieve price stability in the economy.

7.3.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is Non-Bank Financial Intermediaries ?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i. Which means the neutriality of money?

7.4.Answer to check your progress Questions.

1. Non-Bank Financial Intermediaries (NBFIs) is a heterogeneous group of financial institutions other than commercial and co-operative banks. They include a wide variety of financial institutions, which raise funds from the public, directly or indirectly, to lend them to ultimate spenders.

2.The neutrality of money is a basic result reached in the classical full-employment model based on flexibility of prices and wages. If increase in money supply and consequent rise in prices has no real effects, then inflation would not be a matter of concern.

7.5.Summary

In this unit you have learnt about the meaning of Nature and Functions of Financial Intermediaries and The Supply of Money .This knowledge would make you understand what is Nature and Functions of Financial Intermediaries and The Supply of Money Approach and how it can be worked in the Monetary economics. The concept Nature and Functions of Financial Intermediaries and The Supply of Money such as would have

made you to distinguish the activites form the supply of money activities and you might have learnt about the meaning and its approaches in the transaction supply of money.

7.6.Key words

Notes

Non-Bank Financial Intermediaries, neutrality of money

7.7.Self Assessment Questions and Exercises.

Short Answer Questions

1. What is Non-Bank Financial Intermediaries ?

2. Which means the neutriality of money?

Long answer Questions.

1. Detail Non-Banking Financial Intermediaries -

2.Explain The Classical System and the Neutrality of Money.

7.8.Further Readings

Ghosh and Rama Ghosh, (1985), "**Fundamentals of Monetary Economics"** ,2nd Edition, Himalaya Publishing House, Mumbai.

UNIT-8: THEORIES OF MONEY:

8.1.The Patinkin System and the Neutrality of Money

8.1 Patinkin's Monetary Model – Explained

Introduction:

In 1956 there appeared a monumental work by Don Patinkin which, inter alia, demonstrated the rigid conditions required for the strict proportionality rule of the quantity theory whilst simultaneously launching a severe attack upon the Cambridge analysis.

Patinkin's main point of contention was that the advocates of the cash balance approach had failed to understand the true nature of the quantity theory.

Their failure was revealed in the dichotomy which they maintained between the goods market and the money market. Far from integrating the two, as had been claimed, Patinkin held that the neo-classical economists had kept the two rigidly apart.

An increase in the stock of money was assumed to generate an increase in the absolute price level but to exercise no real influence upon the market for commodities. One purpose of Patinkin's analysis was that only by exerting an influence upon the market for commodities, via the real balance effect, could the strict quantity theory be maintained.

Part of Patinkin's attack revolved round the nature of the demand curve for money, which according to Patinkin, Cambridge School had generally assumed to be a rectangular hyperbola with constant unit elasticity of the demand for money. As a matter of fact, such a demand curve was implicit in the argument that a doubling of the money stock would induce a doubling of the price level.

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Patinkin used the 'real balance effect' to demonstrate that the demand curve for money could not be of the shape of a rectangular hyperbola (i.e., the elasticity of demand for money cannot be assumed to be unity except in a stationary state), and moreover, such a demand curve would contradict the strict quantity theory assertion which the Cambridge quantity theorists were trying to establish Patinkin's main point is that cash balance approach ignored the real balance effect and assumed the absence of money illusion under the assumption of 'homogeneity postulate' and, therefore, failed to bring about a correct relation between the theory of money and the theory of value.

The homogeneity postulate implies that the demand functions in the real sectors are assumed to be insensitive to the changes in the absolute level of money prices (i.e., with changes in the quantity of money there will be equi-proportional changes in all money prices), which indicates absence of money illusion and the real balance effect. But this is valid only in a pure barter economy, where there are no money holdings and as such the concept of absolute price level has no or little meaning. The money economy in reality, cannot be without money illusion.

Assumptions:

Patinkin has been able to show the validity and the rehabilitation of the classical quantity theory of money through Keynesian tools with the help of and on the basis of certain basic assumptions: for example, it is assumed that an initial equilibrium exists in the economy, that the system is stable, that there are no destabilizing expectations and finally there are no other factors except those which are specially assumed during the analysis. Again, consumption functions remains stable [the ratio of the flow of consumption expenditure on goods to the stock of money (income velocity) must also be stable.

Further, it is assumed that there are no distribution effects, that is, the level and composition of aggregate expenditures are not affected by the way in which the newly injected money is distributed amongst initial recipients and the reaction of creditors and debtors to a changing price level offset each other. It is also assumed that there is no money illusion. Thus, Patinkin has discussed the validity of the quantity theory only under conditions of full employment, as according to him Keynes questioned its validity even under conditions of full employment.

In Patinkin's approach we reach the same conclusion as in the old quantity theory of money but we employ modern analytical framework of income-expenditure approach or what is called the Keynesian approach. In other words, Patinkin has rehabilitated the truth contained in the old quantity theory of money with modern Keynesian tools.

Let us be clear that Patinkin first criticised the so called classical dichotomy of money and then rehabilitated it through a different route. The classical dichotomy which treated relative prices as being determined by real demands (tastes) and real supplies (production conditions), and the money price level as depending on the quantity of money in relation to the demand for money.

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In such classical dichotomy there is a real theory of relative prices and a monetary theory of the level of prices, and these are treated as being separate problems, so that in analysing what determines relative prices one does not have to introduce money; whereas in analysing what determines the level of money prices, one does not have to introduce the theory of relative prices. The problem here is (before Patinkin has been) how these two theories can be reconciled—once this has been done, the other problem is—whether the reconciliation permits one to arrive at the classical proposition that an increase in the quantity of money will increase all prices in the same proportion, so that relative prices are not dependent on the quantity of money.

This particular property is described technically as neutrality of money. If money is neutral, an increase in the quantity of money will merely raise the level of money prices without changing relative prices and the rate of interest (which is a particular relative price). In Pigou's terminology, money will be simply a 'veil' covering the underlying operations of the real system.

According to Patinkin this contradiction could be removed and classical theory reconstituted by making the demand and supply functions depend on real cash balances as well as relative prices. While this would eliminate the dichotomy, it would preserve the basic features of the classical monetary theory and particularly the invariance of the real equilibrium of the economy (relative prices and the rate of interest) with respect to changes in the quantity of money.

The real balance effect has been one of the most important innovations in thought concerning the quantity theory of money. This is also called 'Pigou Effect', because it was developed by him but Don Patinkin criticized the narrow sense in which the term real balance effect was used by Pigou and he used it in a wider sense.

Suppose a person holds certain money balances and price level falls, the result will be an increase in the real value of these balances. The person will have a larger stock of money than previously, in real terms, though not in nominal units. Similarly, if the private sector of the economy, taken as a whole, has money balances larger than its net debts, than a fall in the price level will lead to increased spending and the quantity theory of money to that extent stands modified, the important variable to watch is not M, but M/P, that is, real money balances. The real balance effect and the demand for money substitutes go to constitute important modifications of the quantity theory of money.

Thus, we find that the solution to this problem, as Patinkin develops it, is to introduce the stock of real balances held by individuals as an influence on their demand for goods. The real balance effect, therefore, is an essential element of the mechanism which works to produce equilibrium in the money market. Suppose, for example, that for some reason prices fall below their equilibrium level—this will increase the real wealth of the cash-holders—lead them to spend more money—and that in turn will drive prices back towards equilibrium.

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Thus, the real balance effect is the force behind the working of the quantity theory. Similarly if there is a chance to increase in the price level, this will reduce people's real balances and therefore lead them to rebuild their balances by spending less, this in turn will force prices back down, so that the presence of real balances as an influence on demands ensures the stability of the price level. Thus, the introduction of the real balance effect disposed of classical dichotomy, that is, it makes it impossible to talk about relative prices without introducing money; but it nevertheless preserve the classical proposition that the real equilibrium of the system will not be affected by the amount of money, all that will be affected will be the level of prices.

"Once the real and monetary data of an economy with outside money are specified", says Patinkin, "the equilibrium value of relative prices, the rate of interest, and the absolute price level are simultaneously determined by all the markets of the economy."

According to Patinkin, "The dynamic grouping of the absolute price level towards its equilibrium value will—through the real balance effect—react back on the commodity markets and hence the relative prices." Hence, the integration of monetary and value theory through the explicit introduction of real balances as a determinant of the behaviour and the reconstitution of classical monetary theory, is the main theme and contribution of Patinkin's monumentally scholarly work—Money, Interest and Prices.

Keynes criticized the old quantity theory of money on two grounds: that velocity of circulation is not a constant of economic behaviour and that the theory was valid only under highly rigid assumptions. Don Patinkin agrees in his approach to the problem that the Keynesian analysis and economic variables provide more dependable interrelationships than does the velocity of circulation. In other words, a breakdown of expenditure into the sum of C and I is more useful analytical device than the breakdown into the product of the stock of money and the velocity of circulation.

Patinkin assumes full employment and deals with the above-mentioned criticism of Keynes that even under rigid assumptions the quantity theory is not valid unless certain other conditions are also fulfilled. According to Patinkin, these other conditions mentioned by Keynes (besides, full employment) are that the propensity to hoard [that part of the demand for money which depends upon the rate of interest—$M_2(r)$] should always be zero in equilibrium and that the effective demand (AD) should increase in the same proportion as the quantity of money—this will depend on the shapes of LP, MEC, CF functions.

Don Patinkin has shown that irrespective of the values of the marginal propensities to consume and invest and the existence of a non-zero propensity to hoard; an increase in the quantity of money must ultimately bring about a proportional increase in prices (leaving the interest rate unaffected) once the real balance effects are brought into the picture. Thus, Keynes' argument that the above conditions must be fulfilled has been proved incorrect by Patinkin.

Further, with the help of real balance effect Patinkin shows that the quantity theory will hold good even in the extreme Keynesian case where the initial increase in the quantity of money directly affects only the demand for bonds (M_2) and finally Patinkin has shown that a change in the quantity of money does not ultimately affect the rate of interest—even though a change in the rate of interest does affect the amount of money demanded.

Real Balance Effect:

The term 'real balance effect' was coined by Patinkin to denote the influence of changes in the real stock of money on consumption expenditure, that is, a change in consumption expenditure as a result of changes in the real value of the stock of money in circulation. This influence was taken into consideration by Pigou also under what we call 'Pigou Effect', which Patinkin described as a bad terminological choice. Pigou effect was used in a narrow sense to denote the influence on consumption only, but the term real balance effect, has been made more meaningful and useful by including in it all likely influences of changes in the stock of real balances.

In other words it considers the behavioural effects of changes in the real stock of money. The term has been used by Patinkin in a wider sense so as to include the net wealth, effect, portfolio effect, Cambridge effect, as well as any other effect one might think of. Patinkin used the term real balance effect to include all the aspects of real balances in the first edition of his book. It is in the second edition of his book that Patinkin emphasises the net wealth aspect of real balances though he does not completely exclude other aspects as detailed above.

Unless the term is used in a wider sense so as to include all the aspects of real balances, its use is likely to be misleading and may fail to describe a generalized theory of people's reactions to changes in the stock of real balances. The use of the term in the wider sense as enunciated above also helps us to resolve the paradox—that income is the main determinant of expenditure on the micro level and wealth is a significant determinant of income on the macro level.

The analysis of the real balance effect listed three motives why people would alter their spending and, therefore, demand for money in response to a change in the aggregate stock of money. First, the demand for money is a function of the level of wealth. The wealthier the people, the more the expenditure on goods; second, they hold money for security as a part of their diversified portfolios; third, just as the demand for every superior good increases with a rise in income, so does the demand for money. Individuals usually desire that their cash balances should bear a given relation to their yearly income.

Therefore, other things being equal—wealth, portfolio structure and income determine the demand for money as also the spending decisions. Hence, corresponding to these three motives of the demand for money, there are three different aspects of the real balance effect—each of which may operate either directly on the demand for commodities or may operate indirectly by stimulating the demand for financial assets (securities etc.), raising their prices, lowering the interest rate, stimulating investments, increasing incomes, resulting in a rise in demand for commodities.

Net Wealth Effect:

Net wealth effect is the first and important aspect of the real balance effect. According to this interpretation, an increase in real balances produces an increase in spending because it changes one's net wealth holding, which by definition includes currency, net claims of the private domestic sector on foreigners and net claims of the private sector on the government sector. Hence, consumption is a function of net wealth, rising or falling as real balances increase or decrease.

An increase in real balances results in individuals increasing their spending on goods because they are wealthier, or they have come to hold too much money in their portfolios, or because their balances have become too large in relation to their incomes.

Clearly, the direct net wealth aspect has become identified primarily with the term real balance effect. Besides, there is an indirect process also through which changes in real balances affect expenditures—an increase in real balances stimulates initially the demand for financial assets (securities), which in turn, reduces interest rates making investments more attractive, stimulating incomes and expenditures. Some writers simply emphasize the direct net wealth aspect.

They include, G. Ackley, Fellner, Mishan, Collery. These authors primarily associate the term real balance effect with the net wealth aspect, to the exclusion of all others. Other economists point out to the indirect operation of the real balance effect. Harrod and later on Mishan supported the view that there is an indirect effect of real balance phenomenon. Therefore, the real balance effect in its most general sense covers both the direct and indirect methods by which changes in real balances affect consumer spending.

Portfolio Aspect:

James Tobin is the chief exponent of this view, who is supported by Metzler. According to the portfolio aspect of the real balance effect, a decrease in price level causes investor's portfolios to consist of more money than desired in proportion to the portfolio. Accordingly, they spend more and their effort to restore the actual to the desired amount of money changes the price level until equilibrium is restored. In their attempt to remedy the situation, individuals spend their excess supply of money directly on the physical assets or indirectly in the financial market (for securities etc.).

Equilibrium is restored when prices change (rise or fall) to such an extent that real balances once again come to bear the desired relation to the value of the portfolios. A distinguishing feature of the portfolio aspect is that people increase or decrease their expenditures in order to restore their stock of money to the optimum level with respect to their asset portfolio.

Cambridge Aspect:

This is the third aspect of the real balance effect. It differs from others in that it views the demand for money primarily as a function of income. According to Cambridge aspect, an increase in the stock of real balances increases real balances relative to income. If previously one held

Notes

cash balances equal to 1/10th of the yearly income; then after an increase in real balances one would, for example, hold cash balances equal to 1/5th of the yearly income. Finding themselves with more than optimal fraction of income in money terms, people begin to spend more.

If they spend for commodities the price level increases in accordance with the direct aspect; if they spend on bonds (securities) the equilibrium will be restored through indirect process or operation. In other words, equilibrium will be restored, when other things being equal, the price level has risen in proportion to the increase in the money supply.

However, let us be clear that spending is influenced by, how wealthy people feel they are their portfolio balance and the relation of cash balances to income. The wealth effect, the portfolio effect and the Cambridge aspect of the real balance effect are all interrelated and it is merely for the sake of convenience that a division amongst the three aspects of the real balance effect is made.

Critical Evaluation:

This is Patinkin’s solution to the problem but it has not been accepted. The basic disagreements centre on whether or not it is necessary to retain this real balance effect in the real analysis. Patinkin’s model may be considered as an elegant refinement of the traditional quantity theory and its value lies in specifying precisely the necessary conditions for the strict proportionality of the quantity theory to hold and in analysing in detail the mechanism by which the change in the stock of money takes effect—the real balance effect.

Although Patinkin’s analysis is said to be the formally incomplete because it fails to provide an explanation of full long run equilibrium, yet the integration of product and monetary markets through the real balance effect represented a significant improvement over earlier treatments. For the first time, the nature of the wealth effect is made explicit. What, however, is not analysed is the manner in which the increase in monetary wealth comes about. A doubling of money balances is simply assumed and the analysis rests entirely on the resultant effects.

The Patinkin effect fails to take into account the long-run equilibrium effect as has been pointed out by Archibald and Lipsey and conceded by Patinkin in the second edition of his work. They show that Patinkin’s analysis of the real balance effect is inadequate inasmuch as he confines himself to the impact effect of a change in a price and does not work the analysis through to the long-run equilibrium. The result of the debate is that the real balance effect must be considered not as a necessary part of the general equilibrium theory but as a part of the analysis of monetary stability, in that context it performs the functions of ensuring stability of the price level.

What one needs the real balance effect for is to ensure the stability of the price level; one does not need it to determine the real equilibrium of the system; so long as one confines oneself to equilibrium positions. The equilibrium obtained is no doubt a short-term equilibrium only because

further changes will be induced for income recipients in future time periods. Moreover, it is very interesting to point out that if the analysis is extended to an infinite number of periods, general long-run equilibrium is found to be perfectly consistent with – a unit elastic demand curve for money—the real balance effect disappears. Therefore, this again raises a thorny question of whether the quantity theory is a theory of short-run or long-run equilibrium or indeed whether it should be considered a theory of equilibrium at all?

Even otherwise, it has been pointed out that if some kind of monetary effect has got to be present, it need not necessarily be a real balance effect as the presence of real balance effect implies that people do not suffer from money illusion—they hold money for what it will buy.

This assumption yields the classical monetary proposition that a doubling of the money supply will lead to a doubling of prices and no change in real equilibrium. But a recent article by Cliff Lloyd has shown that stability of price level can be attained without assuming simply that there is a definite quantity of money which people want to hold. The mere fact that they want to hold money and that the available quantity is fixed will ensure the stability of price level—but it will not produce the neutrality of the money of the classical theory.

Further, G.L.S. Shackle has criticised Patinkin's analysis. He feels that Keynes analysis took account of money and uncertainties, whereas in Patinkin' analysis the objective is to understand the functioning of money economy under perfect interest and price certainty. He accepts that once the 'Pandora Box' of expectations and interest and price uncertainty is opened on the world of economic analysis, anything may happen and this makes all the difference between two approaches. Patinkin's treatment is a long-term equilibrium of pure choice, while Keynes treatment is of short-term equilibrium of impure choice.

J.G. Gurley and E.S. Shaw have also criticised the static assumptions of Patinkin and have enumerated and elucidated the conditions to show under which money will not be neutral. They bring back into the analysis, the overall liquidity of the monetary and financial structure and differing liquidity characteristics of different assets,' which were excluded by the assumptions made in Patinkin's analysis, in which money is not itself a government debt but is issued by the monetary authority against private debt (inside money as contrasted with the outside money).

They show that money cannot be neutral in a system containing inside and outside money. Outside money is the money which comes from outside the private sector and simply exists. One can think of outside money being gold coins in circulation or paper currency printed by the government. Outside money represents wealth to which there corresponds no debt. Inside money is the money created against private debt. It is typified by the bank deposits created by a private banking system. These writers have shown that if the money supply consists of a combination of inside and outside money, the classical neutrality of money does not hold good as claimed by Patinkin. The main difference between Keynes and Patinkin approaches is that Keynes assumed the price level given does not assume full employment, whereas

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Patinkin has tried to establish the validity of the quantity theory by assuming full employment but not the price level. Patinkin discussed the validity of the quantity theory under full employment because Keynes questioned its validity even under conditions of full employment.

Patinkin's Monetary Model and Neutrality of Money:

The mechanism of Patinkin's monetary model can be elaborated as follows:

Suppose there are four markets in the economy—goods, labour, bonds and money. In each of these markets there is a demand function, there is a supply function and a statement of the equilibrium condition, namely, a statement that prices, wages and interest rate are such that the amount demanded in the market equals the amount supplied. By virtue of what we call 'Walras law', we know that if equilibrium exists in any three of these markets, it must also exist in the fourth.

Considering the markets for finished goods Keynes' aggregate demand function would comprise of consumption plus investment plus government demand. Following Keynes, we assume that the real amount demanded of finished goods (E) varies directly with the level of national income (K), and inversely, with the rate of interest (r).

Assume further that E also depends directly on the real value of cash balances held by the community M_0/P (where Mo is the amount of money in circulation assumed constant, and p is an index of the prices of finished goods). In other words, a decrease in the price level, which increases these real cash balances, is assumed to cause an increase in the aggregate amount of goods demanded and vice versa.

Thus, the real aggregate demand function for goods is shown:

$E = f(Y, r, M_0/P)$ …… (i)

Since, there exists full employment, therefore, the supply function of finished goods can be written as:

$Y - Y_0$ …(ii)

where, Y_0 is the level of real national product (equal by definition to the level of real national income) corresponding to full employment condition.

The statement of equilibrium in the goods market is then that the goods demanded equal the goods supplied that is:

$E = Y$ …(iii)

In the labour market let us assume that the demand for labour (N_d) is equal to the supply of labour (N_s) at the real wage rate (W/p) Therefore,

$N_d = g\ (W/p)$ …..(iv)

and $N_s = h\ (W/p)$ …(v)

Therefore, $N_d = N_s$ …….. (vi)

Thus, the full employment level of real national income Y_0 (in the market for finished goods) is directly related to the full employment level of employment No in the labour market.

In the money market, let us assume that the individual is concerned with the real value of cash balances and that he holds or his demand for money is denoted by M_d/P, and assume further as Keynes, that this total demand is divided into transactions and precautionary demand varying with

Notes

the level of income (Y) and speculative demand varying inversely with the rate of interest (r). Thus,

$$\frac{M_d}{p} = L_1(Y) + L_2(r) \qquad ...(vii)$$

or

$$\frac{M_d}{p} = L(Y, r) \qquad ...(viia)$$

or $M_d = pL(Y, r)$, this the demand for *nominal* (money) cash balances. ...(viib)

Since we *assume* that the nominal amount of money in circulation is fixed at the constant level M_0, therefore, the supply function of money is :

$$M_s = M_0 \qquad ...(viii)$$

and therefore, in equilibrium $M_d = M_s$ ...(ix)

To complete the analysis we must examine the model from the viewpoint of general equilibrium analysis. The above-mentioned nine equations and nine variables (E, Y, p, N_d, N_s w/p, M_d, M_s, r) can be reduced to the following three equations and three variables p, w and r and we get the following equations for the initial period:

$$f\left(Y_0, r, \frac{M_0}{p}\right) = Y_0 = \text{good market} \qquad ...(x)$$

$$g(w/p) = h(w/p) = \text{labour market} \qquad ...(xi)$$

$$pL(Y_0, r) = M_0 = \text{money market} \qquad ...(xii)$$

These are the conditions for equilibrium in the markets for goods, labour market and money market. Further, assume that there exists a price level p_0, a wage level w_0, and interest rate r_0, whose joint existence (at p_0, w_0, r_0), simultaneously satisfies the equilibrium conditions for all the three markets.

In other words, the same set of values—P_0, w_0, and r_0, simultaneously cause:

(a) The formation of an aggregate function showing that the aggregate amount demanded (AD) is equal to the full employment output,

(b) Equalizes the amount demanded of labour with the supply,

(c) Equates the amount demanded for money with the supply of money. Under certain simple assumptions, the equilibrium position described here must be a stable one.

For example, suppose an excess demand for the goods raises the absolute price level and an excess demand for money raises the rate of interest and the labour market is always in equilibrium (because there is very little lag between money, wages and prices). Also assume that there are no destabilising expectations then, the above assumptions made about the forms and slopes of the various demand and supply functions ensure the stability of the system.

The Effect of an Increase in the Quantity of Money:

The equilibrium position as described above prevails during a certain initial period (t). Now, let us assume that there is a new injection of additional quantity of money into circulation which disturbs the initial equilibrium position. We shall see how a new equilibrium position is

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established (comparative statics) and how does the system converge to the new equilibrium position over time (dynamics).

Suppose the amount of money in circulation increases from M_0 to (1 + t) M_0, where t is a positive constant. It will be seen that a new equilibrium position will come to exist in which prices and wages have risen in the same proportion as the amount of money and the rate of interest has remained unchanged.

Thus, when the amount of money in circulation was M_0, the equilibrium of the economy was attained by p_0, w_0 and r_0. But when the money increases to (I + t) M_0 the new equilibrium is attained at the price level (I + t) P_0, wage rate (I + t) w_0 and interest rate remaining unchanged at ro. Now, when the prices rise in the same proportion as the amount of money, the real value of cash balances is exactly the same as it was in the beginning or in the initial period t and the rate of interest remains unchanged.

Hence, the new aggregate demand (function) must be identical with the aggregate demand (function) of the initial period and as the market for goods was in equilibrium in the initial period it must be in equilibrium now. Similarly, if wages and prices rise in the same proportion then the real wage rate remains the same as it was in the initial period and, therefore, the labour market which was in equilibrium at the initial real wage rate (w_0) must be in equilibrium now.

The position in money market is slightly different. When the amount of money supplied has increased from M_0 to (I + t) M_0, it is clear that the demand function (schedule) for money must also change and if the demand schedule for money does not change and remains in its original position, then it is obvious that the equilibrium cannot be attained at the initial rate of interest ro. We know that the demand schedule for money cannot remain in its original position because the nominal amount of money demanded depends upon the price level and if the price level increases, so must also the demand for money.

In other words, in the initial period when the price level is p_0 and the rate of interest is r_0, people wish to hold M_0 (amount of money)—but when the price level has increased from p_0 to (I + t) P_0, people must wish to hold the larger amount of money; say, (I + t) M_0. Hence, when the amount of money in circulation is (I + t) M_0, the money market, too, is or becomes in equilibrium at the price level (I + t) p_0 because the demand for money has gone up to (I + t) M_0 but the rate of interest will remain unchanged at r_0 as shown in the Fig. 29.1.

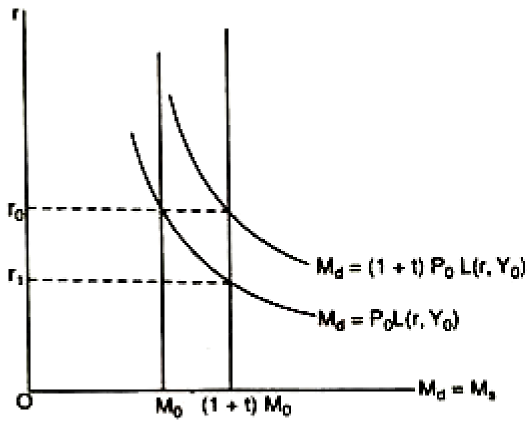


Fig. 29.1

Patinkin has shown that the same kind of equilibrium is possible even when the analysis is dynamic, that is, through different time periods. The typical time paths of the variables would be such as to generate equilibrating forces e.g., the quantity theorists assert that in the initial stages after an increase in the amount of money the rate of interest would decline (from Or_0 to Or_1 in Fig. 29.1); but that when prices begin to rise due to increase in money supply, the interest rate, too, would rise again to its original level (from Or_0 to Or_1). In other words, with an increase in the quantity of money the price level no doubt rises continuously towards the new equilibrium level and the same will be true of the wage rates. Under these circumstances, Patinkin's analysis has shown that the interest rate may decline first but rises once again to its original value.

Equilibrium in the market can be established only at a rate of interest lower than r_0, for only by such reduction could individuals be induced to hold additional money available. But prices, on the other hand, have also changed by now. Since the excess supply in money market shows excess demand in the commodity market, this excess demand must result in raising the prices.

This, in turn, reacts back on the money market (through the multiplicative p in the demand for money equation). In particular when the price level has finally doubled, the demand for money must also double, bringing back the original rate of interest r_0.

This is the crucial and central point of Patinkin's analysis. It is true that during the process the system may, at limes, 'over-compensate' and the price level and the interest rate may be at some stage rise above their equilibrium values but, it cannot be denied, as claimed by Patinkin that an increase in the quantity of money would raise the price level proportionately at the invariance (un-alterability) of the rate of interest.

The whole process is bound to generate equilibrating forces which will lower the values of various variables to their equilibrium positions. Thus, we see that once we keep in mind Patinkin's influence of the real cash balances in mind and an increase in the quantity of money will cause an equi-proportionate increase in price level and money wages while leaving the rate of interest unaffected (thereby maintaining the neutrality of money). Although we have reached this conclusion, as does Patinkin, through modern analytical framework of income-expenditure approach or the Keynesian approach but the result that emerges is that of the traditional quantity theory of money.

Neutrality of Money:

The above analysis of Patinkin's monetary model brings to light very clearly one of the salient features of money or the quantity of money called the 'neutrality of money'. If money is neutral, an increase in the quantity of money will merely raise the level of money prices without changing the relative prices and the interest rate. Patinkin (with the help of Keynesian framework) arrives at the classical conclusion that relative prices and the rate of interest are independent of the quantity of money.

The significance of his approach lies mainly in establishing the neutrality of money. However, it is this neutrality of money, which has been the main object of attack by Gurley and Shaw in their— 'Money in a Theory

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of Finance'—the main purpose of this book is to elaborate conditions under which money cannot be neutral. Gurley and Shaw severely criticized this feature of neutrality of money, for establishing which Patinkin had taken so much pain. Gurley and Shaw distinguished between outside money and inside money to show that the money will not be neutral.

Gurley and Shaw with the help of different mathematical and monetary models show that if the money supply consists of a combination of inside and outside money, the classical neutrality of money does not hold good. A money supply consisting of a combination of inside and outside money implies that changes in the quantity of money will not simply produce a movement up or down in the general price level but will also produce changes in relative prices.

This conclusion is easy enough to understand—whenever the public holds a combination of these kinds of money, a change in the quantity of one of them without a change in the other will change the ratios in which people are obliged to hold assets and owe liabilities. If there is a change in the amount of outside money alone without a change in the amount of inside money, there must be a change in the ratios of the debt that backs the inside money to the outside money, so that a change in the quantity of money involves a change in the real variables of the economic system, as a whole.

For example, suppose there is only outside money in an economic system like gold coins and let us suppose that the quantity of this money (gold coins) is doubled which simultaneously doubles the price level, then we get back to the initial real situation—that is, all the relative prices are the same and the ratio of real balances to everything else is the same as it was before.

Let us suppose, now that there are two kinds of money gold coins and bank deposits—suppose, we double the amount of gold coins but do not change the amount of bank deposits-—then, if we double the price level we can restore the real value of gold coins, but we will reduce the real value of bank deposits and the assets backing them, so that the community cannot get back to the situation, it started from.

Consequently, there must be some change somewhere else in the economic system to reconcile people's desires for assets and liabilities with the changed amounts that are available. This analysis takes Gurley and Shaw several hundred pages to develop, but the key to it is, the devising of a situation in which the ratios of assets change. The whole purpose of their analysis is to show that money is not neutral. H.G. Johnson also endorses these views expressed by Gurley and Shaw on the non-neutrality of money.

Lloyd Metzler has also repudiated the neutrality of money theory with the help of general equilibrium model through IS and LM curves as shown in Fig. 29.2. In this diagram, we measure income along OY and rate of interest along vertical Or. The initial equilibrium income and the rate of interest corresponding to full employment are simultaneously determined by the intersection of IS_0 and LM_0 curves at income Y_0 and interest r_0 respectively.

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Now, if the central bank follows a policy of open market operations and begins purchasing securities and bonds, the nominal stock of money will increase; this, in turn, will cause a shift in the LM function from LM_1 to LM_2 which will determine equilibrium at a lower rate of interest r_1 and the income Y_1 .There is, now, an excess of income over the full employment income.

This excess of income is shown by $Y_0 Y_1$ .This represents the inflationary gap. This will initiate a process of inflation. The real balance effect will now become operative and the LM function will shift to LM_1. The IS function will also shift at the same time from IS_0 to IS_1, on account of a reduction in consumption spending owing to a decline in the value of real balances.

The shifting of the LM curve to LM_1 and IS_0 curve to IS_1 will restore the equilibrium again at full employment income Y_0 but the rate of interest has declined from r_0 to r_2. Hence, the money is not neutral (because the rate of interest cannot be considered to remain unaffected).

Unless a few conditions are fulfilled th e money cannot be neutral, for example, there must be an absence of money illusion, wage-price flexibility, absence of distribution effects, absence of government borrowing and open market operations and there is no combination of inside-outside money. According to Patinkin, an individual suffering from money illusion reacts to the change in money prices.

Money illusion constitutes a friction in the economic system and as such it makes it imperative for the monetary authority to create just the right amount of nominal balances if the neutrality of money is to be achieved. Similarly, flexibility of wages and prices is an important condition of the neutrality of money. Rigidity of wages and prices will prevent the real balance effect from making itself felt and hence it will become difficult to abolish inflationary pressures.

Money will, as a result, be non-neutral. The distribution effects imply the redistribution of real incomes, goods balances and bond amongst the individuals and institutions following changes in prices and stock of money. For example, a price increase may reduce the demand for consumer goods and increase the demand for money and bonds bringing about a redistribution against high consuming groups and in favour of high saving and lending groups.

Such a redistribution will mean a lowering in the rate of interest in case the quantity of money is doubled. Money, under these circumstances (unless distribution effects are absent), cannot be neutral. Again, the government borrowings and central banking open market operations have non-neutral effects on the system. Money will be non-neutral, as already seen, if there is a combination of inside-outside varieties of money.

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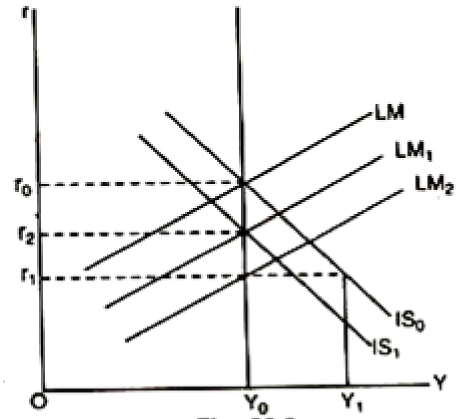


Fig. 29.2

8.2.Monetarists vs. Keynesians with Empirical Evidence

Monetarist economics is Milton Friedman's direct criticism of Keynesian economics theory, formulated by John Maynard Keynes. Simply put, the difference between these theories is that monetarist economics involves the control of money in the economy, while Keynesian economics involves government expenditures. Monetarists believe in controlling the supply of money that flows into the economy while allowing the rest of the market to fix itself. In contrast, Keynesian economists believe that a troubled economy continues in a downward spiral unless an intervention drives consumers to buy more goods and services.

Both of these macroeconomic theories directly impact the way lawmakers create fiscal and monetary policies. If both types of economists were equated to motorists, monetarists would be most concerned with adding gasoline to their tanks, while Keynesians would be most concerned with keeping their motors running.

Keynesian Economics, Simplified The terminology of demand-side economics is synonymous with Keynesian economics. Keynesian economists believe the economy is best controlled by manipulating the demand for goods and services. However, these economists do not completely disregard the role the money supply has in the economy and on affecting the gross domestic product, or GDP. Yet, they do believe it takes a great amount of time for the economic market to adjust to any monetary influence.

Keynesian economists believe in consumption, government expenditures and net exports to change the state of the economy. Fans of this theory may also enjoy the New Keynesian economic theory, which expands upon this classical approach. The New Keynesian theory arrived in the 1980s and focuses on government intervention and the behavior of prices. Both theories are a reaction to depression economics.

Monetarist Economics Made Easy

Monetarists are certain the money supply is what controls the economy, as their name implies. They believe that controlling the supply of money directly influences inflation and that by fighting inflation with the

supply of money, they can influence interest rates in the future. Imagine adding more money to the current economy and the effects it would have on business expectations and the production of goods. Now imagine taking money away from the economy. What happens to supply and demand?

Monetarist economics founder Milton Friedman believed the monetary policy was so incredibly crucial to a healthy economy that he publicly blamed the Federal Reserve for causing the Great Depression. He implied it is up to the Federal Reserve to regulate the economy.

Keynesian, Monetarist Theories in Politics

Presidents and other lawmakers have applied multiple economic theories throughout history. Soon after the Great Depression, President Herbert Hoover failed in his approach to balancing the budget, which entailed increasing taxes and spending cuts. President Roosevelt followed next and focused his administration's efforts on increasing demand and lowering unemployment. It is worth noting that Roosevelt's New Deal and other policies increased the supply of money in the economy.

More recently, the 2007-08 financial crisis led President Obama and other lawmakers to address economic problems by bailing out banks and fixing underwater mortgages for government-owned housing. In these instances, it appears elements of Keynesian and Monetarist theories were used to reduce the national debt.

8.3.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is Net wealth effect?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is real balance effect?

Notes

8.4.Answer to check your progress Questions.

1. Net wealth effect is the first and important aspect of the real balance effect. According to this interpretation, an increase in real balances produces an increase in spending because it changes one's net wealth holding, which by definition includes currency, net claims of the private domestic sector on foreigners and net claims of the private sector on the government sector. Hence, consumption is a function of net wealth, rising or falling as real balances increase or decrease.

2. Real Balance Effect:

The term 'real balance effect' was coined by Patinkin to denote the influence of changes in the real stock of money on consumption expenditure, that is, a change in consumption expenditure as a result of changes in the real value of the stock of money in circulation. This influence was taken into consideration by Pigou also under what we call 'Pigou Effect', which Patinkin described as a bad terminological choice. Pigou effect was used in a narrow sense to denote the influence on consumption only, but the term real balance effect, has been made more meaningful and useful by including in it all likely influences of changes in the stock of real balances.

8.5.Summary

In this unit you have learnt about the meaning of Patinkin system and natural of money. This knowledge would make you understand what in Patinlin system of money and how it can be worked at a monetary level. The concept such as natural and Keynesian these activities from the monetary activities and you might have learnt about the meanings of neutrality of money in the monetary context.

8.6.Key words

Net wealth effect, real balance effect

8.7.Self Assessment Questions and Exercises.

Short Answer Questions

1. What is Net wealth effect?

2. What is real balance effect?

Long answer Questions.

1.Explain the Patinkin System and the Neutrality of Money

2. Detail Monetarists vs. Keynesians with Empirical Evidence.

8.8.Further Readings

Laidler, David (1993), **"The Demand for Money",** 4th edition. Harper Collins,New York.

UNIT-9: INFLATION

9.1.Inflation

Inflation: Definitions, Kinds, and Causes of Inflation

Two concepts (Demand of money and Supply of money) play a crucial role in the functioning of an economy.

An imbalance in any of these two functions can cause discrepancies in the whole functioning of an economy.

"The word inflation in the broadest possible sense refers to any increase in the general price-level which is sustained and non-seasonal in character"- Peterson.

Consequently, there is an increase in the general level of prices of goods and services over a given period of time. A persistent increase in the general price levels of goods and services is known as inflation.

Some of the popular definitions of inflation given by different management gurus are as follows:

According to Coulborn inflation can be defined as, "too much money chasing too few goods."

According to Parkin and Bade, "Inflation is an upward movement in the average level of prices. Its opposite is deflation, a downward movement in the average level of prices. The boundary between inflation and deflation is price stability."

According to Samuleson-Nordhaus, "Inflation is a rise in the general level of prices."

In the words of Peterson, "The word inflation in the broadest possible sense refers to any increase in the general price-level which is sustained and non-seasonal in character."

As per Johnson, "Inflation is an increase in the quantity of money faster than real national output is expanding."

Keynes has presented his view that true inflation is the one in which the elasticity of supply of output is zero in response to increase in supply of money. In other words, there is no change in supply of output when the supply of money increases, which is a case of full employment.

In case of full employment, the situation would not be inflationary. However, we do not rely on classical view of full employment. Therefore, when the supply of money increases then the output and price also increase. In case, the rise in prices exceeds the rise in output, then the situation is termed as inflationary situation.

Kinds of Inflation:

Inflation is usually categorized on the basis of its rate and causes. Here, we would study the types of inflation based on its rate.

Broadly, inflation can be of three types based on its rate, which are as follows:

(a) Moderate Inflation:

Takes place when the prices of goods and services rise at a single digit rate annually. Moderate inflation is also termed as creeping inflation. When an economy passes through moderate inflation, the prices of goods and services increase but at moderate rate.

However, the rate of increase in prices under this type of inflation varies from country to country. Moderate inflation is a type of inflation that can be anticipated; therefore, individuals hold money as a store of value.

(b) Galloping Inflation:

Refers to a type of inflation that occurs when the prices of goods and services increase at two-digit or three-digit rate per annum. Galloping inflation is also known as jumping inflation. In the words of Baumol and Blinder, "Galloping inflation refers to an inflation that proceeds at an exceptionally high."

Galloping inflation has adverse effect on middle and low income groups in the society. As a result, individuals are not able to save money for future. This kind of situation requires strict measures to control inflation.

(c) Hyperinflation:

Occurs when the rate of increase in prices is extremely high or out of control. In other words, hyperinflation takes place when the increase in prices is more than three-digit rate annually. Hyperinflation takes place when there is an unrestricted increase in the supply of money in the market.

This leads to a situation of imbalance in the supply and demand of money. Consequently, money loses its real worth at a rapid rate, which, in turn, leads to an increase in prices. The economic condition of Germany in 1922 and 1923 is the best example of hyperinflation. Apart from this, in 1989 and 1991, Argentina, Brazil, and Zimbabwe were also striving hard to overcome hyperinflation.

Causes of Inflation:

Generally, inflation takes place in an economy when demand for goods and services exceeds the supply of output. Therefore, causes of inflation have two sides, the demand side and supply side.

The various causes of inflation are as follows:

(a) Increase in demand:

Takes place due to the following factors:

i. Increase in money supply

ii. Increase in disposable income

iii. Increase in expenditure on investment and consumption goods

iv. Increase profit-making capacity of producers and retailers

v. Increase in foreign demand and exports

vi. Increase in population

The aforementioned causes of inflation may work alone or in combination with each other. The main cause of inflation is the excessive government spending on economic growth and developmental plans. This causes increase in money supply in the market As a result, the disposable income of individual's increases, which, in turn, increases their purchasing power.

(b) Constant supply of output:

Occurs due to the following factors:

i. Lack of capital equipment

ii. Lack of factors of production, such as trained labor, raw materials, and inefficient management

iii. Increase in exports to get foreign currency

iv. Decrease in imports due to various reasons, such as war or restriction on imports

v. Increase in restrictive trade practices to get advantage from rise in price in future

vi. Prolonged industrial unrest.

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9.2.Market Theories of Inflation and Non-Market Theories of Inflation

Market Theories of Inflation and Non-Market Theories of Inflation

Different economists have presented different theories on inflation. The economists who have provided the theories of inflation are broadly categorized into two labels, namely, monetarists and structuralists.

Monetarists associated inflation to the monetary causes and suggested monetary measures to control it.

On the other hand, structuralists believed that the inflation occurs because of the unbalanced economic system and they used both monetary and fiscal measures together for sorting out economic problems.

There are three main theories of inflation, which are shown in Figure-3:

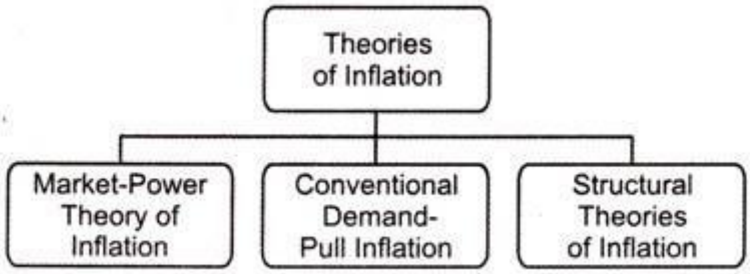


Figure-3: Different Theories of Inflation

Let us learn about the different theories of inflation (as shown in Figure-3) in detail.

Market-Power Theory of Inflation:

In an economy, when a single or a group of sellers together decide a new price that is different from the competitive price, then the price is termed as market-power price. Such groups keep prices at the level at which they can earn maximum profit without any concern for the purchasing power of consumers.

For example, in the past few years, the prices of onion were very-high in India. The soaring price of onions was the result of the group action of onion producers. In such a situation, people in middle and low income groups reduced the consumption of onions. However, onion producers earned high profits from higher income group.

According to the advanced version of market power theory of inflation, oligopolists can increase the price to any level even if the demand does not rise. This hike in price levels occurs due to increase in wages (because of trade unions) in the oligopolistic industry.

The increase in wages is compensated with the hike in prices of products. With increase in the income of individuals, their purchasing power also increases, which further results in inflation.

Apart from this, some economists concluded that fiscal and monetary policies are not applicable in practical situations as these policies are not able

to control rise in prices levels. These policies would work only when prices rise due to an increase in demand.

Moreover, these policies cannot be applied to oligopolistic rise in prices, which is due to increase in the cost of production. Monetary policy can reduce the rate of inflation by raising the interest rate and regulating the credit flow in the market. However, it would have no effect on the oligopolistic price as the cost is transferred to the prices of goods and services.

Conventional Demand-Pull Inflation:

The market power theory of inflation represents one extreme end of inflation. According to this theory inflation exists even when there is no excess in demand. On the other end, the conventional demand-pull theorists believed that the only cause of inflation is the excess of aggregate demand over aggregate supply.

In full employment equilibrium condition, when demand increases, inflation becomes unavoidable. In addition in full employment condition, the economy reaches to its maximum production capacity. At this point, the supply of goods and services cannot be increased further while the demand of products and services increases rapidly. Due to this imbalance between demand and supply, inflation takes place in the economy.

Structural Theories of Inflation:

Apart from the two extreme ends mentioned in the above, there is a middle group of economists called structural economists. According to structural theory of inflation, market power is one of the factors that cause inflation, but it is not the only factor. The supporters of structural theories believed that the inflation arises due to structural maladjustments in the county or some of the institutional features of business environment.

They have provided two types of theories to explain the causes of inflation, which are shown in Figure-4:

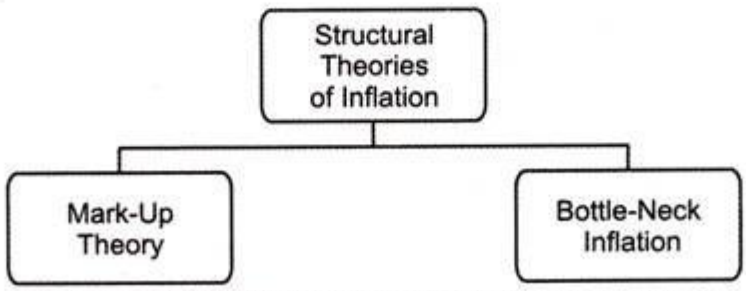


Figure-4: Different Types of Structural Theories of Inflation

Let us study the different types of structural theories of inflation (as shown in Figure-4) in detail in the next sections.

Mark-up Theory:

Mark-up theory of inflation was proposed by Prof Gardner Ackley. According to him, inflation cannot occur alone by demand and cost factors, but it is the cumulative effect of demand-pull and cost-push activities. Demand-pull inflation refers to the inflation that occurs due to excess of aggregate demand, which further results in the increases in price level. The

increase in prices levels stimulates production, but increases demand for factors of production. Consequently, the cost and price both increases.

In some cases, wages also increase without rise in the excess demand of products. This results in fall in supply at increased level of prices as to compensate the increase in wages with the prices of products. The shortage of products in the market would result in the further increase of prices.

Therefore, Prof. Gardner has provided a model of mark-up inflation in which both the factors, demand cost, are determined. Increase in demand results in the increase of prices of products as the customers spend more on products.

On the other the goods are sold to businesses instead of customers, then the cost of production increases. As a result, the prices of products also increase. Similarly, a rise in wages results in increase in cost of production, which would further increase the prices of products.

So according to Prof Gardner, inflation occurs due to excess of demand or increases in wage rates; therefore, both monetary and fiscal policies should be used to control inflation. Though, these two policies are not adequate to control inflation.

Bottle-Neck Inflation:

Bottle-neck inflation was introduced by Prof Otto Eckstein. According to him, the direct relationship between wages and prices of products is the main cause of inflation. In other words, inflation takes place when there is a simultaneous increase in wages and prices of products. However, he believed that wage push or market-power theories alone are not able to provide a clear explanation of inflation.

After analysis of inflationary situation, Prof Eckstein says that the inflation occurs due to the boom in capital goods and wage-price spiral. In addition, he also advocated that during inflation prices in every industry is higher, but few industries show a very high price hike than rest of the industries.

These industries are termed as bottle-neck industries, which are responsible for increase in prices of goods and services. In addition, Prof. Eckstein advocated that concentration of demand for products of bottle industries results in inflation.

9.3.Monetary Policy, Different types and Tools of Monetary Controls

Monetary policy is a central bank's actions and communications that manage the money supply. That includes credit, cash, checks, and money market mutual funds. The most important of these forms of money is credit. It includes loans, bonds, and mortgages.

Monetary policy increases liquidity to create economic growth. It reduces liquidity to prevent inflation. Central banks use interest rates, bank

reserve requirements, and the amount of government bonds that banks must hold. All these tools affect how much banks can lend. The volume of loans affects the money supply.

Three Objectives of Monetary Policy

Central banks have three monetary policy objectives.[1] The most import is to manage inflation. The secondary objective is to reduce unemployment, but only after controlling inflation. The third objective is to promote moderate long-term interest rates.

The U.S. Federal Reserve, like many other central banks, has specific targets
for these objectives. It wants the core inflation rate to be between 2% and 2.5%. It seeks an unemployment rate below 6.5%. Beyond that, it prefers a natural rate of unemployment of between 4.7% and 5.8%.[2] The Fed's overall goal is healthy economic growth. That's a 2% to 3% annual increase in the nation's gross domestic product.

Types of Monetary Policy

Central banks use contractionary monetary policy to reduce inflation. They reduce the money supply by restricting the amount of money banks can lend. The banks charge a higher interest rate, making loans more expensive. Fewer businesses and individuals borrow, slowing growth.

Central banks use expansionary monetary policy to lower unemployment and avoid recession. They increase liquidity by giving banks more money to lend. Banks lower interest rates, making loans cheaper. Businesses borrow more to buy equipment, hire employees, and expand their operations. Individuals borrow more to buy more homes, cars, and appliances. That increases demand and spurs economic growth.

Monetary Policy Versus Fiscal Policy

Ideally, monetary policy should work hand-in-glove with the national government's fiscal policy. It rarely works this way. Government leaders get re-elected for reducing taxes or increasing spending. As a result, they adopt expansionary fiscal policy. To avoid inflation in this situation, the Fed is forced to use restrictive monetary policy.

For example, during the Great Recession, Republicans in Congress became concerned about the U.S. debt. It exceeded the benchmark debt-to-GDP ratio of 100%. As a result, fiscal policy became contractionary just when it needed to be expansionary. To compensate, the Fed injected massive amounts of money into the economy with quantitative easing.

Monetary Policy Tools

All central banks have three tools of monetary policy in common. First, they all use open market operations. They buy and sell government bonds and other securities from member banks. This changes the reserve amount the banks have on hand. A higher reserve means banks can lend less.

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That's contractionary policy. In the United States, the Fed sells Treasurys to member banks.

The second tool is the reserve requirement. The central banks tell their members how much of their money they must have on reserve each night. If it weren't for the reserve requirement, banks would lend 100% of deposits. Not everyone needs all their money each day, so it is safe for the banks to lend most of it out. That way, they have enough cash on hand to meet most demands for redemption.

When a central bank wants to restrict liquidity, it raises the reserve requirement. That gives banks less money to lend. When it wants to expand liquidity, it lowers the requirement. That gives members banks more money to lend. Central banks rarely change the reserve requirement because it requires a lot of paperwork for the members.

The third tool is the discount rate. That's how much a central bank charges members to borrow funds from its discount window. It raises the discount rate to discourage banks from borrowing. That reduces liquidity and slows the economy. It lowers the discount rate to encourage borrowing. That increases liquidity and boosts growth.

In the United States, the Federal Open Market Committee sets the discount rate a half-point higher than the fed funds rate. The Fed prefers banks to borrow from each other.

Most central banks have many more tools. They work together to manage bank reserves.

For example, the Fed has two other major tools. Its most well-known is the fed funds rate. This is the interest rate that banks charge each other to store their excess cash overnight. The target for this rate is set at the FOMC meetings. The fed funds rate impacts all other interest rates, including bank loan rates and mortgage rates.

The Fed, as well as many other central banks, also uses inflation targeting. It clearly sets expectations that the banks want some inflation. The Fed’s inflation goal is 2% for the core inflation rate. That encourages people to stock up now since they know prices are rising later. It stimulates demand and economic growth.

When inflation is lower than the core, the Fed is likely to lower the fed funds rate. When inflation is at the target or above, the Fed will raise its rate.

The Federal Reserve created many new tools to deal with the 2008 financial crisis. These included the Commercial Paper Funding Facility and the Term Auction Lending Facility.[3] It stopped using most of them once the crisis ended.

The Bottom Line

The Federal Reserve uses monetary policy to manage money supply and interest rates. It does this to influence production, prices, demand, and employment.

Monetary policy is generally categorized as:

- **Expansionary**, which increases liquidity and demand, and consequently, drives economic growth.
- **Contractionary**, which restricts money supply to reduce inflation and slow the rate of economic activity.

Monetary policy is shaped around three economic objectives:

- Control of inflation.
- Employment level management.
- Maintenance of moderate interest rates for the long-term.

The Fed has several tools to develop and implement monetary policy. These include open market operations, the reserve requirement, discount rate, fed funds rate, and inflation targeting.

9.4.Monetary Reforms in India (since 1991)

Importance:

Financial sector reforms refer to the reforms in the banking system and capital market.

An efficient banking system and a well-functioning capital market are essential to mobilize savings of the households and channel them to productive uses. The high rate of saving and productive investment are essential for economic growth. Prior to 1991 while the banking system and the capital market had shown impressive growth in the volume of operations, they suffered from many deficiencies with regard to their efficiency and the quality of their operations.

The weaknesses of the banking system was extensively analyzed by the committee (1991) on financial sector reforms, headed by Narasimham. The committee found that banking system was both over-regulated and under-regulated. Prior to 1991 system of multiple regulated interest rates prevailed. Besides, a large proportion of bank funds was preempted by Government through high Statutory Liquidity Ratio (SLR) and a high Cash Reserve Ratio (CRR). As a result, there was a decrease in resources of the banks to provide loans to the private sector for investment.

This preemption of bank funds by Government weakened the financial health of the banking system and forced banks to charge high interest rates on their advances to the private sector to meet their needs of credit for investment purposes. Further, the lack of transparency in the accounting practice of the banks and non-application of international norms

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by the banks meant that their balance sheets did not reflect their underlying financial position.

This was prominently revealed by 1992 scarcity scam triggered by Harshad Mehta. In this situation the quality of investment portfolio of the banks deteriorated and culture of' non-recovery' developed in the public sector banks which led to a severe problem of non-performing assets (NPA) and low profitability of banks. Financial sector reforms aim at removing all these weaknesses of the financial system.

Under these reforms, attempts have been made to make the Indian financial system more viable, operationally efficient, more responsive and improve their allocative efficiency. Financial reforms have been undertaken in all the three segments of the financial system, namely banking, capital market and Government securities market.

Types of Financial Sector Reforms:

We explain below various reforms in these three segments in financial sector initiated since 1991:

1. Reduction in Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR):

An important financial reform has been the reduction in Statutory Liquidity Ratio (SLR) and Cash Reserve Ratio (CRR) so that more bank credit is made available to the industry, trade and agriculture. The statutory liquidity ratio (SLR) which was as high as 39 per cent of deposits with the banks has been reduced in a phased manner to 25 per cent.

It may be noted that under statutory liquidity ratio banks are required to maintain a minimum amount of liquid assets such as government securities and gold reserves of not less than 25 per cent of their total liabilities. In 2008, statutory liquidity ratio was reduced to 24 per cent by RBI.

Similarly, cash reserve ratio (CRR) which was 15 per cent was reduced over phases to 4.5 per cent in June 2003. It may be noted that reduction in CRR has been possible with reduction of monetized budget deficit of the government and doing away with the automatic system of financing government's budget deficit through the practice of issuing ad hoc treasury bills to the Central Government.

On the other hand, reduction in Statutory Liquidity Ratio (SLR) has been possible because efforts have been made by government to reduce fiscal deficit and therefore its borrowing requirements. Besides, reduction in SLR has become possible because of a shift to payment of market-related rates of interest on government securities.

Since the government securities are free from any risk and now bear market-related interest rates, the banks may themselves feel inclined to invest their surplus funds in these securities, especially when demand for credit by the industry and trade is not adequate.

The reduction in CRR and SLR has made available more lendable resources for industry, trade and agriculture. Reductions in CRR and SLR also made possible for Reserve Bank of India to use open market operations and changes in bank rate as tools of monetary policy to achieve the objectives of economic growth, price stability and exchange rate stability.

Thus, Dr. C. Rangarajan, the former Governor of Reserve Bank of India, says, "As we move away from automatic monetisation of deficits, monetary policy will come into own. The regulation of money and credit will be determined by the overall perception of the Central monetary authority on what appropriate level of expansion of money and credit should be depending on how the real factors in the economy are evolving".

2. End of Administered Interest Rate Regime:

A basic weakness of the Indian financial system was that interest rates were administered by the Reserve Bank/Government. In the case of commercial banks, both deposit rates and lending rates were regulated by Reserve Bank of India. Before 1993, rate of interest on Government Securities could be maintained at low levels through the means of high Statutory Liquidity Ratio (SLR).

Under SLR regulation commercial banks and certain other financial institutions were required by law to invest a large proportion of their liabilities in Government securities. The purpose behind the administered interest-rate structure was to enable certain priority sectors to get funds at concessional rates of interest. Thus the system of administered interest rates involved cross subsidization; concessional rates charged from primary sectors were compensated by higher rates charged from other non-concessional borrowers.

The structure of administered rates has been almost totally done away with in a phased manner. RBI no longer prescribes interest rates on fixed or time deposits paid by their banks to their depositors. Banks have also been freed from any prescribed conditions of premature withdrawal by depositors. Individual banks are free to determine their conditions for premature withdrawal. Currently, there is prescribed rate of 3.5 per cent for Savings Bank Accounts.

Note that Savings Bank Account are actually used by the individuals as current account even with cheque-book facility. Since the banks' cost of servicing these accounts is high, rate of interest on them is bound to be low. Besides, there is lower interest rate ceilings prescribed for foreign currency denominated deposits from non-resident Indians (NRI). Such a lower prescribed ceiling is required for managing external capital flows, especially short-term capital flows, till we switch over to liberalisation of capital account.

Lending rates of interest for different categories which were earlier regulated have been gradually deregulated. However, RBI insists upon transparency in this regard. Each bank is required to announce prime lending rates (PLRs) and the maximum spread it charges. Maximum spread refers to the difference between the lending rate and bank's cost of funds.

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Interest on smaller loans up to Rs. 2,00,000 are regulated at concessional rates of interest. At present, the interest rate on these smaller loans should not exceed the prime lending rates. Besides, lending interest rates for exports are also prescribed and are linked to the period of availment. Changes in prescribed interest rates for exports have been often used as an instrument to influence repatriation of export proceeds.

Thus, except prescribed lending rates for exports and small loans up to Rs. 2, 00,000, the lending rates have been freed from control. Banks can now fix their lending rates as per their risk reward perception of borrowers and purposes for which bank loans are sought.

3. Prudential Norms: High Capital Adequacy Ratio:

In order to ensure that financial system operates on sound and competitive basis, prudential norms, especially with regard to capital-adequacy ratio, have been gradually introduced to meet the international standards. Capital adequacy norm refers to the ratio of paid-up capital and reserves to deposits of banks. The capital base of Indian banks has been very much lower by international standards and in fact declined over time.

As a part of financial sector reforms, capital adequacy norm of 8 per cent based on risk-weighted asset ratio system has been introduced in India. Indian banks which have branches abroad were required to achieve this capital-adequacy norm by March 31, 1994. Foreign banks operating in India had to achieve this norm by March 31, 1993.

Other Indian banks had to achieve this capital adequacy norm of 8 per cent latest by March 31, 1996. Banks were advised by RBI to review their existing level of capital funds as compared to the prescribed capital adequacy norm and take steps to increase their capital base in a phased manner to achieve the prescribed norm by the stipulated date.

It may be noted that Global Trust Bank (GTB), a private sector bank, whose operations had to be stopped by RBI on July 24, 2004 had a capital adequacy ratio much below the prescribed prudent capital adequacy ratio norm. In this regard, link between capital adequacy and provisioning is worth noting. Capital adequacy norm can be met by the banks after ensuring that adequate capital provisions have been made.

To achieve this capital adequacy norm, Government had come in to provide capital funds to some nationalized banks. Some stronger public sector banks raised funds from the capital market by selling their equity. Law was passed to enable the public sector banks to go to the capital markets for raising funds to enhance their capital base. Banks can also use a part of their annual profits to enhance their capital base (that is, ploughing back of retained earnings into investment).

4. Competitive Financial System:

After nationalization of 14 large banks in 1969, no bank had been allowed to be set up in the private sector. While the importance and role of public sector banks in Indian financial system continued to be emphasised, it was however recognized that there was urgent need for introducing greater

competition in the Indian money market which could lead to higher efficiency of the financial system.

Accordingly, private sector banks such as HDFC, Corporation Bank, ICICI Bank, UTI Bank, IDBI Bank and some others have been set up. Establishment of these banks has made substantial contribution to housing finance, car loans and retail credit through credit card system. They have made possible the wider use of what is often called plastic money, namely, ITM cards, Debit Cards, and Credit Cards.

In addition to the setting up of private sector Indian banks, competition has also sought to be promoted by permitting liberal entry of branches of foreign banks, therefore, CITI Bank, Standard Chartered Bank, Bank of America, American Express, HSBC Bank have opened more branches in India, especially in the metropolitan cities

An important recent step is the liberalisation of foreign direct investment in banks. In the budget for 2003-04, the limit of foreign direct investment in banking companies was raised from 49 per cent to the maximum 74 per cent of the paid up capital of the banks. However, this did not apply to the wholly owned subsidiaries of foreign banks.

A foreign bank may operate in India through any one of three channels, namely:

(1) As branches of foreign banks,

(2) A wholly owned subsidiary of a foreign bank,

(3) A subsidiary with aggregate foreign investment up to the maximum of 74 per cent of the paid-up capital.

The above measures are expected to facilitate setting up of subsidiaries by foreign banks. Besides fostering competition among banks they have also increased transparency and disclosure standards to reach the international standards. Banks have to submit to RBI and SEBI, the maturity pattern of their assets and liabilities, movements in the provision account and about non-performing assets (NPA).

RBI’s annual publication ‘Trends and Progress of Banking in India’ provides detailed information on individual bank’s financial position, that is, their losses, assets, liabilities, NPA etc. which enable public assessment of the working of the banks.

5. Non-Performing Assets (NPA) and Income Recognition Norm:

Non-performing assets of banks have been a big problem of commercial banks. Non-performing assets mean bad loans, that is, loans which are difficult to recover. A large quantity of non-performing assets also lowers the profitability of bank. In this regard, a norm of income recognition introduced by RBI is worth mentioning. According to this, income on assets of a bank is not recognized if it is not received within two quarters after the last date.

In order to improve the performance of commercial banks recovery management has been greatly strengthened in recent years. Measures taken to reduce non-performing assets include restructuring at the bank level, recovery of bad debt through Lok Adalats, Civil Courts, setting up of Recovery Tribunals and compromise settlements. The recovery of bad debt got a great boost with the enactment of 'Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest' (SARFAESI). Under this Act, Debt Recovery Tribunals have been set up which will facilitate the recovery of bad debts by the banks.

As a result of the above measures gross NPA declined from Rs. 70,861 crores in 2001-02 to Rs. 68, 715 crores in 2002-03. But there are substantial amounts of non-performing assets whose recovery is still to be made. Besides, as a result of introduction of risk-based supervision by RBI, the ratio of gross NPA to gross advances of scheduled commercial banks declined from 12.7 per cent in 1999-2000 to 8.8 per cent in 2002-03.

6. Elimination of Direct Credit Controls:

Another significant financial sector reform is the elimination of direct or selective credit controls. Selective credit controls have been done way with. Under selective credit controls RBI used to control through the system of changes in margin for provision of bank credit to traders against stocks of sensitive commodities and to stock brokers against shares. As a result, there is now greater freedom to both the banks and borrowers in respect of credit.

But it is worth mentioning that banks are required to observe the guidelines issued by RBI regarding lending to priority sectors such as small scale industries and agriculture. The advances eligible for priority sectors lending have been increased at deregulated interest rates.

This is in accordance with the recognition that the main problem is more of availability of credit than the cost of credit. In June 2004 UPA Government announced that credit to farmers for agriculture will be available at 2 per cent below PLR of banks. Further, credit for agriculture will be doubled in three years time.

7. Promoting Micro-Finance to Increase Financial Inclusion:

To promote financial inclusion the government has started the scheme of micro finance. RBI provides guidelines to banks for mainstreaming micro-credit providers and enhancing the outreach of micro-credit providers inter alia stipulated that micro-credit extended by banks to individual borrowers directly or through any intermediary would henceforth be reckoned as part of their priority-sector lending. However, no particular model was prescribed for micro-finance and banks have been extended freedom to formulate their own model(s) or choose any conduit/intermediary for extending micro-credit.

Though there are different models for pursuing micro-finance, the Self-Help Group (SHG)-Bank Linkage Programme has emerged as the major micro-finance programme in the country. It is being implemented by commercial banks, regional rural banks (RRBs), and cooperative banks.

Under the SHG-Bank Linkage Programme, as on 31 March 2012, 79.60 lakh SHG-held savings bank accounts with total savings of? 6,551 crore were in operation. By November 2012 another 2.14 lakh SHGs had come under the ambit of the programme, taking the cumulative number of savings-linked groups to 81.74. As on 31 March 2012, 43.54 lakh SGHs had outstanding bank loans of Rs. 36,340 crore (Table 35.1). During 2012-13 (up to November 2012), 3.67 lakh SHGs were financed with an amount Rs. 6, 664.15 crore.

Table 35.1 : Progress of Micro-finance Programme

Year	*SHGs Financed by Banks during the year**			*Bank Loan Outstanding*		
	No. (lakh)	*Amount (₹ crore)*	*Growth (%)*	*No. (lakh)*	*Amount (₹ crore)*	*Growth (%)*
2007-08	12.28	8849.26	-	36.26	16999.90	-
2008-09	16.09	12256.51	38.50	42.24	22679.85	33.41
2009-10	15.87	14453.30	17.90	48.52	28038.28	23.62
2010-11	11.96	14547.73	0.65	47.87	31221.17	11.35
2011-12	11.48	16534.77	13.66	43.54	36340.00	16.40

Extension of Swabhimaan Scheme:

Under the Swabhimaan financial inclusion campaign, over 74,000 habitations with population in excess of 2,000 had been provided banking facilities by March 2012, using various models and technologies including branchless banking through business correspondents (BCs).

The Finance Minister in his Budget Speech of 2012-13 had announced that Swabhimaan would be extended to habitations with population more than 1,000 in the north-eastern and hilly states and population more than 1,600 in the plains areas as per Census 2001.

Accordingly, about 45,000 such habitations had been identified for coverage under the extended Swabhimaan campaign. As per the progress received through the conveners of State Level Bankers’ Committee (SLBC), out of the identified habitations, 10,450 have been provided banking facilities by end of December, 2012. This will extend the reach of banks to all habitations above a threshold population.

8. Setting up of Rural Infrastructure Development Fund (RIDF):

The Government of India set up the RIDF in 1995 through contribution from commercial banks to the extent of their shortfall in priority sector lending by banks with the objective of giving low cost fund support to states and state-owned corporations for quick completion of ongoing projects relating to medium and minor irrigation, soil conservation, watershed management, and other forms of rural infrastructure.

The Fund has continued, with its corpus being announced every year in the Budget. Over the years, coverage under the RIDF has been made more broad-based in each tranche and, at present, a wide range of 31 activities under various sectors is being financed.

The annual allocation of funds for the RIDF announced in the Union Budget has gradually increased from Rs. 2000 crore in 1995- 96 (RIDF 1) to

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Rs. 20,000 crore in 2012-13. Further, a separate window was introduced in 2006-07 for funding the rural roads component of the Bharat Nirman Programme with a cumulative allocation of Rs. 18,500 crore till 2009-10.

From inception of the RIDF in 1995-6 to March 2012, 462,229 projects have been sanctioned with a sanctioned amount of Rs. 1, 43,230 crore. Of the cumulative RIDF loans sanctioned to state governments, 42 per cent have gone to the agriculture and allied sector, including irrigation and power; 15 per cent to health, education, and rural drinking water supply; while the share of rural roads and bridges has been 31 per cent and 12 per cent, respectively. The annual allocation of funds under the RIDF has gradually increased from Rs. 2,000 crore in 1995-6 (RIDF I) to Rs. 20,000 crore in 2012-13 (RIDF XVIII).

As against the total allocation of Rs. 1, 72,500 crore, encompassing RIDFI to XVIII, sanctions aggregating Rs. 1, 51,154 crore have been accorded to various state governments and an amount of Rs. 1, 00,051 crore disbursed up to the end of November 2012. Nearly 55 per cent of allocation has been made to southern and northern regions. The National Rural Roads Development Agency (NRRDA) has disbursed the entire amount of Rs. 18,500 crore sanctioned for it (under RIDF XII-XV) by March 2010. During 2012-13 (up to end November 2012), Rs. 5,829 crore was disbursed to the states under the RIDF (Table 35.2).

Table 35.2 : Sanctions and disbursements under the RIDF and Bharat Nirman (Rural Roads Components)

(₹ *crore*)

Region	*2012-13 (up to November 2012)*			*Bank Loan Outstanding*		
	Target	*Achievement*	*Achievement (%)*	*Sanction*	Disbursement*	*Disbursement as % of Sanction*
South	3775	1420	37.6	37899	26529	70.0
West	2170	1134	52.3	22149	15693	70.9
North	4850	1810	37.3	44668	30092	67.4
Central	1480	356	24.1	13080	8078	61.8
East	3800	863	22.7	26600	15625	58.7
NER & Sikkim	725	145	20.0	6758	4034	59.7
Sub total	**16800**	**5728**	34.1	**151154**	**100051**	66.2
Warehousing	-	101	-	2512	1208	48.1
Bharat Nirman	-	-	-	18500	18500	100.0
Grand total	**16800**	**5829**	34.7	**172166**	**119759**	70.0

The Government of India has decided to introduce a Direct Benefit Transfer (DBT) scheme with effect from 1 January 2013. To begin with, benefits under 26 schemes will directly be transferred into the bank accounts of beneficiaries in 43 identified districts across respective states and union territories (UT).

Banks will ensure that all beneficiaries in these districts have a bank account. All PSBs and RRBs have made provision so that the data collected by the Departments/Ministries/Implementing agency concerned can be used for seeding the bank account details in the core banking system (CBS) of

banks with Aadhaar. All PSBs have also joined the Adhaar Payment Bridge of the National Payment Corporation of India for smooth transfer of benefits.

Termination of Automatic Monetisation of Budget Deficits:

This is significant reforms measure to put a check on the growing fiscal deficit of the Central Government. Before 1997 whenever there was a deficit in Central Government budget this was financed by borrowing from RBI through issuing of ad hoc treasury bills. RBI issued new notes against these treasury bills and delivered them to the Central Government.

Since Government incurred deficits year after year, the question of retiring these ad hoc treasury bills did not arise. In this way there was automatic monetisation of Central Government's budget deficit resulting in the increase in reserve money in the economy. With the operation of money multiplier, the increase in reserve money led to a manifold increase in money supply in the economy which contributed to inflationary tendencies in the Indian economy. Dr. C. Rangarajan in an important contribution to financial management highlighted the adverse effects of automatic monetisation of Government's budget deficits through ad hoc treasury bills.

Since in the eighties and nineties Government borrowed heavily due to large fiscal deficits, expansionary impact of these deficits had to be countered by RBI by raising CRR and SLR from time to time. Besides, in the context of heavy borrowing by the Central Government the need to counter the impact on the money supply by raising CRR to mop up excess liquidity increased so as to control inflation.

In this environment RBI could not use the instrument of open market operations to regulate the money supply and rate of interest. At a time when Government borrowed heavily in the market to meet its large deficit, the use of open market operations (i.e. selling Government securities in the open market from its own reserves by RBI) would have resulted in sharp rise in interest rate.

Dr. Rangarajan succeeded in getting abolished the system of automatic monetisation of ever-rising budget deficits through the issue of ad hoc treasury bills by the Government. In its place the system of Ways and Means Advances (WMA) were introduced from April 1,1997. Under this new system of Ways and Means Advance (WMA) financial limits are fixed to accommodate temporary mismatches in Government receipts and payments and further that market related interest rate is charged on these advances.

The limit for WMA and rate of interest charged on them are mutually agreed between RBI and Government from time to time. Further, after 1999 no overdrafts by the Government are permitted for a period beyond 10 consecutive days. Thus, ways and means advances are in fact loans to the Government given by RBI for a short period of time.

It is important to note that with the abolition of ad hoc treasury bills, the system of 91 days tap treasury Bills has also been discontinued with effect from April 1, 1997. Accordingly, with the introduction of the system of

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Ways and Means Advances (WMA), the conventional concept of budget deficit and deficit financing have also lost their relevance.

Therefore, the earlier practice of showing budgetary deficit in Government's budget and the extent of deficit financing has been abandoned. Instead, at present the magnitudes of fiscal deficit, revenue deficit and primary deficits are provided in the budget and become key indicators of Government's fiscal position.

It is clear from above that the new system of Ways and Means Advances (WMA) has given more autonomy to RBI for conducting its monetary policy. Another related important financial reform is the enactment of' Fiscal Responsibility and Budget Management (FRBM)' Act, which provides a relationship between Government's fiscal stance and RBI's monetary management.

According to FRBM, Central Government will take appropriate measures to reduce fiscal deficit to 2 per cent and to eliminate entirely revenue deficit in a time-bound manner by March 31, 2008. It has been provided in the law that revenue deficit and fiscal deficit may exceed targets specified in the rules only on grounds of national security or natural calamity or such other exceptional circumstances as specified by Central Government.

An important provision of the Act is that the Central Government shall not borrow from RBI except by Ways and Means Advances. Further, an important feature of FRBM Act is that RBI will not subscribe to the primary issues of Central Government securities from the year 2006-07.

Pension Reforms:

Since October 2003, a New Pension Scheme (NPS) was introduced by the Central Government for its employees. Later many States have also joined the scheme for their employees. The New Pension Scheme is a contributory retirement scheme.

All employees joining Central Government after January 1, 2004 have to join the scheme and contribute to it to obtain pension after their retirement. Later many states have also joined the scheme for their employees. It is now also open to private individuals and eight fund managers manage the scheme.

The pension authority was named as Pension Fund Regulatory and Development (PFRDA). Till September 2013, this pension authority has been functioning under executive authority since October 2003. Now in September 2013, the Indian Parliament passed the Pension Fund Regulatory Development Authority Bill, eight years after it was introduced in March 2005. This bill seeks to empower PFRDA to regulate the pension scheme (NPS).

The corpus of PFRDA has Rs. 34,965 crore. NPS has been there with us for nine years and to manage such a large amount of Rs. 35,000 crore was not good to be managed by a non-statutory authority. It should be managed

by a statutory authority. All that this new legislation does is to make the non-statutory authority a statutory authority.

The legislation regarding Pension Fund Regulatory and Development Authority passed by the Parliament is an important financial reform that will pave the way for foreign investment in the sector. At present the new pension scheme has about 5.3 million subscribers and the scheme has a corpus of around Rs. 35,000 crore.

The Finance Minister has clarified that foreign investment in the pension sector will be 26% and linked to that in the insurance sector. The government has already approved 49% foreign investment in the insurance sector.

"I am confident that the Pension Bill will be passed in Rajya Sabha," Chidambaram said adding that the government had accepted all but one suggestion of the Standing Committee on Finance that gave its recommendations on the Bill in August 2011. The PFRDA will notify New Pension System schemes that provide minimum assured returns, incorporated after the standing committee suggested some sort of guaranteed returns.

The NPS will also provide for withdrawal for some limited purposes, which was not the case earlier. The reform will go a long way in increasing the coverage of formal pension and social security plans in India, where only about 12% of the active workforce has any formal pension or social security plan.

The opening of the pension sector, even at 26%, will encourage foreign investors to put their money, as India has a huge population that needs social security cover. We do not have much pension products now but once there are more players, there will be more products which will help to channelize this pension money into the economy. The Bill will further empower the PFRDA to regulate the NPS and other pension schemes that are not covered under any Act.

9.5.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is inflation?

Notes

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is Moderate inflation?

9.6.Answer to check your progress Questions.

1. "The word inflation in the broadest possible sense refers to any increase in the general price-level which is sustained and non-seasonal in character"

2. Moderate Inflation:

Takes place when the prices of goods and services rise at a single digit rate annually. Moderate inflation is also termed as creeping inflation. When an economy passes through moderate inflation, the prices of goods and services increase but at moderate rate.

9.7.Summary

In this unit, you have lealont about the meaning, types and theories of inflation

This knowledge would make you cricliks land what is inflation and how it can be worked at a market and monelaty control. The conecpt such as maket theary and Non maket thearics would have made you to distinguish these activities form the inflation and you might have learnt about the meaning and its reforms in the monetary level.

9.8.Key words

Legislation, Inflation, Monetary Policy

9.9.Self Assessment Questions and Exercises.

Short Answer Questions

1. What is inflation?

2.What is Moderate Inflation?

Long answer Questions.

1.Explain Inflation, Market Theories of Inflation and Non-Market Theories of Inflation

2.State Monetary Policy, Different types and Tools of Monetary Controls and Monetary Reforms in India (since 1991).

9.10.Further Readings

Ghosh and Rama Ghosh, (1985), "**Fundamentals of Monetary Economics**" ,
2nd Edition, Himalaya Publishing House, Mumbai.

BLOCK III: FINANCIAL INSTITUTIONS

UNIT-10: INTERNATIONAL MONETARY SYSTEMS:

10.1. IMF

The International Monetary Fund (IMF) is an international organization that aims to promote global economic growth and financial stability, encourage international trade, and reduce poverty.

Understanding the International Monetary Fund

The International Monetary Fund (IMF) is based in Washington, D.C., and currently consists of 189 member countries, each of which has representation on the IMF's executive board in proportion to its financial importance, so that the most powerful countries in the global economy have the most voting power.

The IMF's website describes its mission as "to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world."

IMF Activities

The IMF's primary methods for achieving these goals are monitoring, capacity building, and lending.

The IMF makes loans to countries that are experiencing economic distress in order to prevent or mitigate financial crises.

Surveillance

The IMF collects massive amounts of data on national economies, international trade, and the global economy in aggregate, as well as providing regularly updated economic forecasts at the national and international level. These forecasts, published in the World Economic Outlook, are accompanied by lengthy discussions of the effect of fiscal, monetary, and trade policies on growth prospects and financial stability.

Capacity Building

The IMF provides technical assistance, training, and policy advice to member countries through its capacity building programs. These programs include training in data collection and analysis, which feed into the IMF's project of monitoring national and global economies.

Lending

The IMF makes loans to countries that are experiencing economic distress in order to prevent or mitigate financial crises. Members contribute the funds for this lending to a pool based on a quota system. These funds total around SDR 475 billion (US $645 billion) as of September 2017. (IMF assets are denominated in special drawing rights or SDR, a kind of quasi-currency that is comprised of set proportions of the world's reserve currencies.)

KEY TAKEAWAYS

- The mission of the IMF is to promote global economic growth and financial stability, encourage international trade, and reduce poverty around the world.
- The IMF was originally created in 1945 as part of the Bretton Woods agreement, which attempted to encourage international financial cooperation by introducing a system of convertible currencies at fixed exchange rates.

IMF funds are often conditional on recipients making reforms to increase their growth potential and financial stability. Structural adjustment programs, as these conditional loans are known, have attracted criticism for exacerbating poverty and reproducing the structures of colonialism.

History of the IMF

The IMF was originally created in 1945 as part of the Bretton Woods Agreement, which attempted to encourage international financial cooperation by introducing a system of convertible currencies at fixed exchange rates, with the dollar redeemable for gold at $35 per ounce. The IMF oversaw this system: for example, a country was free to readjust its exchange rate by up to 10% in either direction, but larger changes required the IMF's permission.

The IMF also acted as a gatekeeper: Countries were not eligible for membership in the International Bank for Reconstruction and Development (IBRD)—a World Bank forerunner that the Bretton Woods agreement created in order to fund the reconstruction of Europe after World War II—unless they were members of the IMF.

Since the Bretton Woods system collapsed in the 1970s, the IMF has promoted the system of floating exchange rates, meaning that market forces determine the value of currencies relative to one another. This system continues to be in place today.

10.2.World Bank

The World Bank is an international organization dedicated to providing financing, advice, and research to developing nations to aid their economic advancement. The bank predominantly acts as an organization that attempts to fight poverty by offering developmental assistance to middle- and low-income countries.

Currently, the World Bank has two stated goals that it aims to achieve by 2030. The first is to end extreme poverty by decreasing the number of people living on less than $1.90 a day to below 3% of the world population. The second is to increase overall prosperity by increasing income growth in the bottom 40% of every country in the world.

Understanding the World Bank

The World Bank is a provider of financial and technical assistance to individual countries around the globe. The bank considers itself a unique financial institution that sets up partnerships to reduce poverty and support economic development.

The World Bank supplies qualifying governments with low-interest loans, zero-interest credits, and grants, all for the purpose of supporting the development of individual economies. Debt borrowings and cash infusions help with global education, healthcare, public administration, infrastructure, and private-sector development. The World Bank also shares information with various entities through policy advice, research and analysis, and technical assistance. It offers advice and training for both the public and private sectors.

KEY TAKEAWAYS

- The World Bank is an international organization dedicated to providing financing, advice, and research to developing nations to aid their economic advancement.
- The World Bank and International Monetary Fund were founded simultaneously under the Bretton Woods Agreement with generally the same focus to help serve international governments globally.
- The World Bank has expanded to become known as the World Bank Group with five cooperative organizations, sometimes known as the World Banks.
- The World Bank Group offers a multitude of proprietary financial assistance products and solutions for international governments as well as a range of research-based thought leadership for the global economy at large.

History of the World Bank

The World Bank was created in 1944 out of the Bretton Woods Agreement, which was secured under the auspices of the United Nations in the latter days of World War II. The Bretton Woods Agreement included several components: a collective international monetary system, the formation of the World Bank, and the creation of the International Monetary Fund (IMF). Since their foundings both the World Bank and the International Monetary Fund have worked together toward many of the same goals. The original goals of both the World Bank and IMF were to support European and Asian countries needing financing to fund post-war reconstruction efforts.

Both the World Bank and IMF outlasted the collective international monetary system which was central to the Bretton Woods Agreement. President Nixon halted the Bretton Woods international monetary system in the 1970s. However, the World Bank and IMF remained open and continued to thrive on providing worldwide aid.

The World Bank and IMF are headquartered in Washington, D.C. The World Bank currently has more than 10,000 employees in more than 120 offices worldwide.

Though titled as a bank, the World Bank, is not necessarily a bank in the traditional, chartered meanings of the word. The World Bank and its subsidiary groups operate within their own provisions and develop their own proprietary financial assistance products, all with the same goal of serving countries' capital needs internationally. The World Bank's counterpart, the IMF, is structured more like a credit fund. The differing in the structuring of the two entities and their product offerings allows them to provide different types of financial lending and financing support. Each entity also has several of its own distinct responsibilities for serving the global economy.

World Banks

Through the years, the World Bank has expanded from a single institution to a group of five unique and cooperative institutional organizations, known as the World Banks or collectively as the World Bank Group. The first organization is the International Bank for Reconstruction and Development (IBRD), an institution that provides debt financing to governments that are considered middle income. The second organization within the World Bank Group is the International Development Association (IDA), a group that gives interest-free loans to the governments of poor countries. The International Finance Corporation (IFC), the third organization, focuses on the private sector and provides developing countries with investment financing and financial advisory services. The fourth part of the World Bank Group is the Multilateral Investment Guarantee Agency (MIGA), an organization that promotes foreign direct investments in developing countries. The fifth organization is the International Centre for Settlement of Investment Disputes (ICSID), an entity that provides arbitration on international investment disputes.

10.3. ADB

Asian Development Bank (ADB)

The suggestion for the creation of Asian Development Bank (ADB) was initially made by the Economic Commission for Asia and Far East (ECAFE) in 1963 for the purpose of lending funds, promoting investment, rendering technical assistance to the developing countries and fostering economic growth and co-operation in the developing countries of Asia and the Pacific region. This institution formally commenced its operation in December 1966. Its headquarters are located in Manila, Philippines.

Functions of ADB:

The ADB has been instituted to perform the following main functions:

(i) To promote investment of public and private capital for the development of the countries of Asia and Far East;

(ii) To utilise the available capital resources for executing such projects and programmes which are important for the development needs of member countries;

(iii) To provide assistance to member countries for enabling them to co-ordinate their development plans and policies and thereby achieve better utilisation of resources and expansion of interregional and intra-regional foreign trade;

(iv) To extend technical assistance for the financing and execution of development projects and programmes;

(v) To co-operate with the United Nations and other international, regional and local organisations for mobilising funds for financing development programmes and plans in the member countries ; and

(vi) To render such other services and to undertake such other activities as, further its objectives.

Membership and Organisation of ADB:

Membership:

The membership of ADB is open to all the members and associate members of ECAFE and the members of the United Nations or any of its specialised agencies. By the year ending 2003, 63 countries were its members. Out of them, 45 were regional and 18 non-regional members.

Organisation:

The apex policy making body of the ADB is the Board of Governors. Each member country nominates one Governor and one Alternate Governor. The responsibility for the general direction of the operations of the Bank is vested in the Board of Directors. The Board of Directors is constituted by 12 Directors. Each of them has an Alternate Director. The Directors hold office for a term of two years subject to their re-election. All matters are decided by majority votes except where expressly provided otherwise by the charter.

The total voting power of each member country consists of the sum of its basic votes and proportional votes. The basic votes consist of 30 percent of the total voting power and these are equally distributed among the members. The remaining 70 percent of the total voting power is in proportion to the share held by the member countries in the capital stock of the Bank. The Chairman of the Board of Directors is the President of the Bank. He is assisted in executing management and operations of the Bank by a Vice-President, other officials and the staff.

Capital Resources of ADB:

The ADB initially had an authorized capital of 2.99 billion U.S. dollars. Out of that 1.09 billion U.S. dollars had been subscribed. 50 percent of the subscribed capital was in the form of paid-up capital and the remaining 50 percent was in the form of callable shares. The latter were to serve as security for the obligations of the Bank. The paid- in part of the subscribed capital was to be paid in five equal yearly installments. The members could pay 50 percent of each installment in their local currencies and 50 percent in convertible currencies.

The authorised capital of the Bank was subsequently raised in 1972 and 1976. At the end of June 2003, the authorised capital of the Bank stood at 51.996 billion U.S. dollars, of which 12 percent was in the form of paid-in capital and 88 percent was callable capital. The subscribed capital of ADB at that time stood at US $ 51.997 billion, out of which share of regional members was 63.2 percent and that of non-regional members was 36.8 percent.

The Bank may supplement its resources by increasing its capital, issuing bonds or accepting contributions to what are called as 'Special Funds'. The principal non-regional members include the United States, the United Kingdom, Germany and Japan. They have not only made substantial contributions to the share capital of the ADB but have also made contributions to Bank's Special Funds.

Lending Operations of ADB:

The ADB lending operations are broadly of two types—ordinary and specialised operations. The lending operations financed out of the ordinary capital resources of the Bank are called as ordinary operations. Such loan operations consist of financing of the foreign exchange or local currency component of the cost structure of specified projects.

The Bank can make available to the borrowing countries the required currencies out of its own resources. Apart from providing direct loans for projects in member countries, the Bank also provides indirect loans to the financial institutions in the member countries.

The specialized operations of the Bank are financed from the various Special Funds such as the Technical Assistance Special Fund, Asian Development Fund, Agricultural Special Fund and the Multipurpose Special Fund.

In addition to the provision of project loans to the member countries, the Bank also provides technical assistance to them in the formulation, financing and execution of development plans and projects and the creation of institutions in such fields as agriculture, industry, public administration etc. It also sends technical assistance missions with the approval of potential recipient member countries.

During 1968-73 period, the Bank approved loans amounting to 1.38 billion U.S. dollars to 21 countries for 189 projects. Out of them 26.5 percent loans were given for electrical power projects, 24 percent loans were extended to the projects in the field of transport and communications, 12.5 percent for agricultural development, 11.2 percent for water supply projects and 1 percent for educational projects. During this period, almost 50 percent of the loans went to East Asian countries. India did not ask for assistance from the Bank during this period.

During 1974-92 period, the loans extended by the Bank to the member countries amounted to 41.08 billion U.S. dollars for 931 projects. In the year

ending June 1992, the ADB advanced loans amounting to 5.11 billion U.S. dollars for 65 projects. The loans from ordinary capital resources aggregated 3.95 billion U.S. dollars and loans from Asian Development Fund amounted to 1.16 billion dollars.

63 percent of the credits were for specific projects and 21 percent were for specified sectors in the economies of the member countries. In 2003, out of total ADB lending of US $ 105.07 billion, the highest allocation of 21.87 percent was made for transport and communication sector, followed by 20.33 percent, 17.06 percent and 16.28 percent for economy, agriculture and natural resources and social infrastructure respectively.

The ADB and India:

The Asian Development Bank has been making useful contribution in financing development projects and programmes related to private and public sectors in the developing countries of Asia. Prior to 1986, India made no borrowings from the ADB. The loan authorisation to India during 1986-87 was 251.6 million U.S. dollars which rose to $649.8 million in 1991-92.

The gross inflow of assistance in 1991-92 included 150 million U.S. dollars for Special Assistance Project and 125 million U.S. dollars as the first tranche of the hydro-carbon loan sector. In 1997-98, loan authorisation from ADB amounted to 650 million dollars while it stood at 630 million dollars in 1996-97.

The utilisation of assistance from the ADB was, however, woefully small during 1987-90 period. It amounted to only 153.2 million U.S. dollars which was just 10.55 percent of aid authorisation from the ADB in that period. The utilization of ADB assistance in 1997-98 amounted to 601.1 million U.S. dollars which was only 92.3 percent of the authorised assistance.

Despite the sanctions imposed by Group of Seven (G-7) industrialised countries after Atomic Tests in May 1998, ADB has approved three loans amounting to $ 625 million to India. One of these loans is a $ 250 million programme loan of which $ 100 million have already been released by the ADB. During 1996-99 period, ADB loan disbursement to India was over $ 600 million a year. In 1998, it was 32 percent, higher than the disbursement ratio of China.

During 1999-2002 period, total authorisation of assistance by ADB to this country amounted to $ 3.04 billion. The utilisation of ADB assistance was, however, only $ 1.47 billion. The ADB assistance authorised to India during 2003-09 period amounted to US $ 8.48 billion. During the same period the ADB assistance actually utilised by the country was of the order of US $ 5.37 billion which was 63.3 percent of the authorised assistance. The efforts must be directed to improve the extent of utilisation of assistance secured from the ADB.

The ADB authorised loan assistance amounting US $ 565.2 million in 2010-11. ADB's three year country operations business plan for India for 2012-14 will provide lending assistance of US $ 6.25 billion to support inclusive growth. The lending support will go to key areas like transport, energy, urban development, agriculture, natural resource management, finance and education. In 2014-15, the ADB authorised loan assistance amounting to US $ 799.3 billion. The ADB assistance utilised in that year was US $ 997 million.

The ADB and Government of India agreed to a new country partnership strategy for 2013-2017 period. Under this strategy, ADB will

provide a loan of $ 2 billion annually. The ADB aims at increasing its sovereign and non-sovereign lending to India from the present $ 7 billion to $ 9 billion in three years from 2015 to 2017 to $ 10 billion to 12 billion.

The Asian Development Bank has been planning to increase its portfolio in the private sector in India. It will look into the possibility of taking up equity in private banks, ports, bridges and petrochemical projects. The ADB may also finance some unconventional projects in the private sector such as road maintenance projects. The ADB has, however, no plan to assist the steel industry and oil exploration projects. The latter are considered as "too high risk" projects to be financed by the ADB. The ADB would endeavor to finance more projects in the infrastructure sector.

Criticism of ADB:

The functioning of the ADB has been criticised on the following main grounds:

(i) Emphasis on Lending to Private Sector Projects:

Although objectives of ADB specify that the advances by it would be made for furthering the growth of both private and public sectors in the member countries, yet the ADB operations indicate that higher priority has been given to the private sector projects. It has taken very little interest in the development of public sector which has a key role in the development process of LDC's.

(ii) Tied Loans:

The ADB generally provides tied loans and the borrowing countries are required to utilise funds only for the specified purpose. Such a restriction tends to discourage the developing countries who are in greater need of non-project investible resources.

(iii) High Rate of Interest:

The interest rate charged by the ADB on credits is relatively higher than that charged by some other international financial institutions. The proportion of concessional loans in the total lending of the ADB has remained low. The developing countries of Asia, therefore, have to look to other institutions for assistance.

(iv) Political Bias in Lending:

There is a serious charge against the credit operations of the ADB that there is an element of political bias in its loan policy. The ADB seems to promote the strategies and interests of the United States and her allies. The majority of the Asian countries that have received credit from the ADB included the countries like South Korea, Singapore and Philippines which are fairly developed economies. The countries pursuing independent political and economic policies have not been able to secure assistance from the ADB to the desired extent.

In view of the above objections, it is important that there is a reappraisal of the role and functioning of the ADB so that it can become a more effective and efficient instrument for the accelerated development of the poor countries in the Asian region.

10.4.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of tl unit.

10.5. Answer to check your progress Questions.

1. **IMF Activities**

The IMF's primary methods for achieving these goals are monitoring, capacity building, and lending.

The IMF makes loans to countries that are experiencing economic distress in order to prevent or mitigate financial crises.

2. **Functions of ADB:**

The ADB has been instituted to perform the following main functions:

(i) To promote investment of public and private capital for the development of the countries of Asia and Far East;

(ii) To utilise the available capital resources for executing such projects and programmes which are important for the development needs of member countries;

(iii) To provide assistance to member countries for enabling

10.6.Summary

In this unit, you have learnt about the meaning of IMF and NABARD. This knowledge would make you and what is IMF and how it can be worked at a International monetary systems. The conecpt such as IMF and world bank would have made you to distrifuish these activites form the International monetaly systems only you might have learnt about the meaning and its functions of IMF and ADB in the monetary context

10.7.Key words

cooperative organizations, assistance

10.8.Self Assessment Questions and Exercises.

Short Answer Questions

1. What is IMF activities?

2. What is ADB Functions?

Long answer Questions.

1.Explain the IMF

2. Detail the World Bank and ADB

10.9.Further Readings

Jhingan, M.L. (2012), **"Monetary Economics",** Vrindha Publications (P) Ltd, New Delhi.

Notes

UNIT-11: INDIAN MONETARY SYSTEMS:

11.1. RBI

What Is the Reserve Bank of India (RBI)?

The Reserve Bank of India (RBI) is the central bank of India, which was established on April 1, 1935, under the Reserve Bank of India Act. The Reserve Bank of India uses monetary policy to create financial stability in India, and it is charged with regulating the country's currency and credit systems.

Understanding the Reserve Bank of India (RBI)

Located in Mumbai, the RBI serves the financial market in many ways. The bank sets the overnight interbank lending rate. The Mumbai Interbank Offer Rate (MIBOR) serves as a benchmark for interest rate–related financial instruments in India.

The main purpose of the RBI is to conduct consolidated supervision of the financial sector in India, which is made up of commercial banks, financial institutions, and non-banking finance firms. Initiatives adopted by the RBI include restructuring bank inspections, introducing off-site surveillance of banks and financial institutions, and strengthening the role of auditors

First and foremost, the RBI formulates, implements, and monitors India's monetary policy. The bank's management objective is to maintain price stability and ensure that credit is flowing to productive economic sectors. The RBI also manages all foreign exchange under the Foreign Exchange Management Act of 1999. This act allows the RBI to facilitate external trade and payments to promote the development and health of the foreign exchange market in India.

The RBI acts as a regulator and supervisor of the overall financial

system. This injects public confidence into the national financial system, protects interest rates, and provides positive banking alternatives to the public. Finally, the RBI acts as the issuer of national currency. For India, this means that currency is either issued or destroyed depending on its fit for current circulation. This provides the Indian public with a supply of currency in the form of dependable notes and coins, a lingering issue in India. In 2018 the RBI banned the use of virtual currencies by the financial agencies and banks that it regulates.

KEY TAKEAWAYS

- The Reserve Bank of India (RBI) is the central bank of India,
- The RBI was originally set up as a private entity in 1935, but it was nationalized in 1949.
- The main purpose of the RBI is to conduct consolidated supervision of the financial sector in India, which is made up of commercial banks, financial institutions, and non-banking finance firms.

History of the RBI

The RBI was originally set up as a private entity, but it was nationalized in 1949. The reserve bank is governed by a central board of directors appointed by the national government. The government has always appointed the RBI's directors, and this has been the case since the bank became fully owned by the government of India as outlined by the Reserve Bank of India Act. Directors are appointed for a period of four years.

According to its website, the current focus of the RBI is to continue its increased supervision of financial institutions, while dealing with legal issues related to bank fraud and consolidated accounting and attempting to create a supervisory rating model for its banks.

11.2. NABARD

National Bank for Agriculture and Rural Development (NABARD)

The Indian economy post independence was an agricultural economy. After independence, the focus was mainly on manufacturing and trade sector of the economy to boost development. However, a major part of the population in India live in the rural sector and so it is important to develop rural financial activities. This is why the government set up NABARD.

National Bank for Agriculture and Rural Development (NABARD)

As the name suggests NABARD is a development bank focussing primarily on the rural sector of the country. It is, in fact, India‘s apex development bank. It is one of the most important institutions in the country. NABARD is responsible for the development of the small industries, cottage industries, and any other such village or rural projects.

Established on 12th July 1982, it had an initial capital of 100 crores. The bank is under the supervision of a Board of Directors which the

Government of India will appoint. The headquarters of NABARD is in Mumbai but it has many branches and regional divisions.

Notes

NABARD is instrumental in the development and efficiency of the current rural credit system. Over half the credit in the rural region comes from Co-operative banks and Regional Rural Banks. NABARD is responsible for regulating and supervising the functioning of such banks. Over the years NABARD has been pushing for development in the credit schemes for rural populations to meet their new credit requirements.

Other than meeting credit requirements of the rural sector NABARD is also instrumental in social innovations and projects. It partners with various organizations for many innovative projects such as SHG-Bank linking, innovative schemes for water and soil conservation. Over the last three decades, the institution has gained goodwill and trust in the farmers and rural communities.

Functions of NABARD

Let us take a look at some of the main functions of this organisation. It basically performs three kinds of roles, i.e. credit functions, development functions, and supervisory functions.

- Frames the policy for rural credit in the country for all financing institutions
- National Bank for Agriculture and Rural Development will itself provide finance and refinancing facilities to the banks and rural regional banks
- Identification of credit potential and preparation of the credit plans for all districts
- It also helps all regional banks and institutes under its governance with the preparation of their own credit plans and policies
- Helps Regional Rural Banks establish an agreement with State Governments and other Co-op Banks and institutions
- It will also monitor the implementation of such plans and track their progress
- Helps banks improve their MIS system, modernize their technology, develop human resources etc
- As per the Banking Regulation Act 1949, NABARD has to conduct the inspection of Regional Rural Banks and other Co-op banks
- It communicates and consults the RBI in matters such as issuing of licenses for new banks, the opening of branches of Rural Banks etc.
- From time to time it will also inspect the investment portfolios of Regional Rural Banks and other State Co-op Banks

Notes

11.3.RRB

Introduction to Regional Rural Banks of India:

Rural banking institutions are playing a very important role for all-round development of rural areas of the country. In order to support the rural banking sector in recent years, Regional Rural Banks have been set up all over the country with the objective of meeting the credit needs of the most under privileged sections of the society.

These Regional Rural Banks (RRBs) have been receiving a high degree of importance and attention in the rural credit system.

Considering the gross absence of banking facilities in the rural areas of the country, the Reserve Bank of India in consultation with the Central Government, State Governments and some major nationalized sponsored banks had set up some Regional Rural Banks in the late 1970s with a view to elevate the economic status of the rural poor as well as to inculcate a habit of saving among the rural masses.

As per the recommendations of the Working Group on Rural Banks, the regional rural banks were established in 1975 for supplementing the commercial banks and co-operatives in supplying rural credit. The main objective of regional rural banks in India is to advance credit and other facilities, especially to small and marginal farmers, agricultural labourers, artisans and small entrepreneurs in order to develop agriculture, trade, commerce, industry and other usual productive activities in different rural areas of the country.

At the initial stage, five regional rural banks were established on October 2, 1975 at Gorakhpur and Moradabad in Uttar Pradesh, Jaipur in Rajasthan, Bhiwani in Haryana and Malda in West Bengal under the sponsorship of State Bank of India, the Syndicate Bank, United Commercial Bank, Punjab National Bank and United Bank of India respectively.

All these five RRBs have an authorised capital of Rs 1 crore and paid-up capital of Rs 25 lakh. The share capital of RRB is subscribed in the following manner—as the Central Government—50 per cent, the State Government concerned—15 per cent and the sponsoring commercial bank—35 per cent.

The regional rural banks are maintaining its special charter it their of operation is very much limited to a definite region, grant direct loan to rural people at concessional rates and receive subsidies and concessions from the Reserve Bank and the sponsoring bank.

The concessions granted by the Reserve Bank of India are:

(a) Allowing RRBs to maintain cash reserve ratio at 3 per cent and statutory liquidity ratio at 25 per cent;

Progress of Regional Rural Banks in India:

In the mean time, the regional rural banks have extended their network throughout the country to a considerable extent. Initially, there were

196 regional rural banks operating in 28 states with nearly 14,700 branches. Till June 1996, these RRBs have been lending annually nearly Rs 1500 crore to the rural people and more than 90 per cent of the loan has been advanced to weaker sections.

As on September, 1990, the RRBs had advanced jointly to the tune of Rs 3,560 crore in the form of short-term crop loans, term loans for agricultural activities, for rural artisans, cottage and village industries, retail trade, self-employment projects and consumption loans etc.

Among all the states, Uttar Pradesh is the state where larger number of RRB branches has already been opened. Recently, after amalgamation, the number of RRBs has been reduced to 92.

During the last 30 years, RRBs have been participating actively in various programmes designed for providing credit assistance to identified beneficiaries included under the new 20 Point Programme, IRDP and other programmes designed for scheduled castes and tribes. RRBs are also advancing loans to weaker sections and physically handicapped persons under differential rate of industrial (DIR) schemes.

At the end of June 2014, there were 92 amalgamated RRBs, covering 518 districts of the country with a network of 18,291 branches. Out of all these branches of RRBs, 4,042 are the rural branches as on June 30, 2014 which constitute about 21.4 per cent of the total branches of RRBs.

The loans and advances stood at Rs 7,852.7 crore as at the end of September 1996. Again, Rs 15,423 crore were mobilised as deposits by RRBs at the end of September 1996. Consequent upon the permission of the Reserve Bank of India to determine their own lending rate with effect from 26 August 1996, most of the RRBs have been charging interest rates on their loans varying between 13.5 to 19.5 per cent per annum.

In recent years, under the softer interest regime, interest rates on loans advanced by RRBs have also declined considerably. Again, total amount of credit advanced to the agriculture by the RRBs increased considerably from Rs 6,069.79 crore in 2002-03 to Rs 43,968 crore in 2010-11.

As on March 31, 2002 total outstanding deposits of RRBs stood at Rs 44,327.81 crore and total outstanding advances stood at Rs 18,586.97 crore. Out of the 196 RRBs, 170 RRBs are making profit in recent years after introducing measures under banking reforms. Chalapathi Rao Committee on Regional Rural Banks has also recommended privatisation of profit making RRBs in a phased manner.

In order to make Financial Inclusion Plan of the government effective and to expand the penetration of banking network in unbanked and under-banked rural areas, regional rural banks (RRBs) also worked out its branch expansion plan for 2011-12 and 2012-13 with 10 per cent increase over the previous year.

Accordingly, RRBs could open 913 branches in 2011-12 against its target of opening 1247 branches. This figure compares favorably with that of opening of 521 branches in 2010-11 and 299 branches in 2009-10. For 2012-13, a target of opening 1845 new branches has also been set.

Evaluation of Regional Rural Banks:

Regional Rural Banks have made commendable progress in advancing various types of loan to the weaker and under privileged section of the rural society. As per our recent RBI report, "The RRBs have fared well in achieving the objective of providing access to weaker sections of the society to institutional credit but the recovery position on the whole is not satisfactory."

The working of RRBs was evaluated by the Narasimham Committee on the Financial System. Although RRBs were set up in order to provide a low cost alternative to the operation of commercial bank branches, particularly in the rural areas but the functioning of RRBs was not up to the mark.

The Committee mentioned three basic problems of RRBs:

(a) RRBs have a low earning capacity due to so many restrictions placed on the business undertaken by these banks;

(b) With the recent award of a tribunal the wages and salary scales of RRBs would be similar to that of commercial banks and thus the very idea of low cost alternative to the operation of commercial bank has been nullified; and

(c) The very area of operations of RRBs is also being utilised by the sponsoring banks by running their own rural branches leading to certain anomalies like duplication of services and expenditures on control and administration.

Thus the Narasimham Committee is of the opinion that the viability of RRBs should be improved without sacrificing the basic objective. The Government should also try to evolve a rural banking structure and base of RRBs with adequate financial strength and management and organisational skills of the commercial banks.

But there are some inherent factors which are very much responsible for this non-viable nature of RRBs. These include:

(i) RRBs can set up its branches mostly in unbalanced and under-banked areas;

(ii) The lending operations of RRBs are very much confined to target group composed of small borrowers of rural and semi-urban areas; and

(iii) The rate of interest charged by RRBs on their loan are comparatively lower.

The Committee to Review Arrangements for Institutional Credit for Agriculture and Rural Development (CRAF1CARD) has also indicated the same above mentioned reasons responsible for growing non-viability of

RRBs.

Functional Superiority of Regional Rural Banks:

Regional Rural Banks have also established functional superiority over other commercial banks of the country. This superiority of RRBs has been brought out by the share of deposits contributed by these branch offices of RRBs in different states. The share of deposits of these branches of RRBs in December, 1991 in a state like Uttar Pradesh was 25.7 per cent in comparison to that of only 12.4 per cent for other Scheduled Commercial Banks.

This achievement is noteworthy if we consider that the number of branches of RRBs (1,193) was even lower than that of other scheduled commercial banks (1,361). Moreover, the share of deposits of RRBs in Haryana was also higher than other scheduled commercial banks which had comparatively double the number of branches.

Another important matter that has also been noticed is that most of the branches of RRBs are opened in unbanked centres and thus the deposits mobilised by them are fresh deposits and are not diverted from the deposits per branch of RRBs established before 1980 is uniformly higher in almost all the states of the country. In respect of credit operations, RRBs were successful in identifying the target groups and also in meeting their credit requirements.

Unsatisfactory Performance of Regional Rural Banks:

The Regional Rural Banks (RRBs) have been experiencing an unsatisfactory performance since last few years. Therefore, the RRBs have now become a serious problem for the Indian Banking sector. They are now far from fulfilling purpose for which they were set up some two decades ago.

These RRBs have been incurring heavy losses year after year. In 1990-91, the RRBs incurred a total loss of Rs 92.87 crore, followed by Rs 258.66 crore during 1991-92. In 1993-94, 173 out of the country’s 196 RRBs incurred losses to the tune of Rs 310 crore.

As per the latest data available with the National Bank for Agriculture and Rural Development (NABARD), the total accumulated losses of all Regional Rural Banks, operating in the country are estimated at Rs 2,176 crore as on 31st March, 1996.

It is, therefore, not surprising that these banks, established for the purpose of providing an impetus to rural growth have dismally failed to boost agro-based rural economy. One of the major contributory factors responsible for the mounting losses suffered by the RRBs has been very high overheads; in which a sizeable component is salaries. Employees of RRBs earlier received lower scales of salaries compared to their counterparts in the scheduled nationalized banks.

However, in 1990, with implementation of the National Industrial Tribunal (NIT) Award in case of the employees of the RRBs, the structure of their emoluments was brought at par with that of the staff of the scheduled

commercial banks.

The NIT award has enhanced the salary-allowance bill of RRBs by 35 per cent during the last three years, apart from increase in its other concomitant expenditure. Moreover, it also placed on the banks shoulder an arrear burden of Rs 225 crore.

While the annual wage liability of the RRBs has increased substantially, their income was declining rapidly on account of inadequate loan recoveries and scanty profits. Only 23 of the 196 RRBs were making a profit and the rest were all running losses. The aggregate level of loss at the end of March 1994 was Rs 906 crore.

Over the last three years, the credit-deposit ratio of RRBs had also declined from 85.6 in 1989-90 to as low as 68.7 in 1991-92. Further, the increasing number of defaulters has hampered the recycling of cash. In 1992, the loan over dues stood at Rs 1,314 crore.

Due to the constant efforts, at recapitalizing RRBs, at the end of March, 2000, 158 RRBs are posting operating profits. Out of these, 48 RRBs have been able to wipe out their accumulated losses. In view of the importance of RRBs in rural financing, the government has decided to continue with this programme of strengthening the RRBs in the coming years.

Restructuring of Regional Rural Banks:

The present situation is forcing the bank to initiate corrective measures to put them back in stream. The government of India has undertaken restructuring of the RRBs. Towards that end their issue capital has been raised from Rs 25 lakh to Rs one crore in the case of 140 banks and Rs 50 lakh in the remaining cases. A provision of Rs 5 crore for the purpose was made by the government during 1993-94.

The issue capital of the RRBs is shared by the Central Government, all the state governments and various sponsoring banks. At the end of March, 1992 the total credit support extended to the banks amounted to Rs 4090.86 crore. As on the same date the banks had mobilised Rs 5868 crore from 345 lakh accounts.During. 1991-92, the RRBs disbursed only Rs 1,107 crore among 23 lakh rural people drawn from the weaker sections of the society.

To revitalize the banks a sum of Rs 402 crore was released in 1991-92 by the state owned National Bank for Agriculture and Rural Development (NABARD). The weak condition of RRBs has been reflected from the fact that many have completely wiped out their equity and reserves and in some, the losses are even eating into deposits.

This is an unsustainable situation and long term structural measures are necessary if these banks are to be rehabilitated.

Attributing high establishment and operational cost, low level of business and restricted area of operation as the main causes for the loss, the RBI had initiated certain measures to enable RRBs to diversify their

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operations.

In line with the government's focused strategy for improving the viability of the Regional Rural Banks in the country as many as 136 RRBs have been provided financial support to the tune of Rs 573 crore for their comprehensive revamping. By according priority to revival of viable RRBs instead of tackling the problem in a generalized manner, it is expected to bring down considerably the losses of RRBs and make them stand on their own feet.

The RRBs have been advised to prepare bank specific development action plans to enable them to adopt a systematic approach for their turn around. Besides, the RRBs have been permitted by the RBI to deploy a part of their surplus non-statutory liquidity Ratio fund in the credit portfolio of their sponsor banks.

The RBI has fully deregulated the interest rates that can be charged to the ultimate borrowers by the RRBs. Now there is even a move to merge all the 92 RRBs to form a National Rural Bank of India, for which NABARD would contribute 76 per cent of the equity.

Recapitalisation of Regional Rural Banks to Improve their CRAR:

RRBs have been playing an important role in credit delivery in rural areas. In order to bring the capital to risk-weighted assets ratio (CRAR) or RRBs up to at least 9 per cent, Dr. K.C. Chakraborty Committee inter alia recommended recapitalization support to the extent of Rs 2,200 crore to 40 RRBs in 21 states.

In pursuant to the recommendation of the committee, recapitalization amount is to be shared by the stakeholders in proportion to their shareholding in RRBs, i.e., 50 per cent by central government, 15 per cent by concerned state government, and 35, per cent by the concerned sponsor banks.

Accordingly, the central government share works out to Rs 1,100 crore. The recapitalisation process, which started in 2010-11 was to be completed by 2011-12. Although the central government released about Rs 468.9 crore during 2010-11 and 2011-12 to 21 RRBs, but the process to recapitalisation could not be completed in 2011-12 as all the related state governments could not release their share towards recapitalisation.

Therefore, the recapitalisation scheme has been extended up to March 2014. In the mean time, the budget for 2012-13 has made provision for Rs 200 crore for this purpose and the same was released in time. Thus till 31st December 2012, a total sum of Rs 668.9 crore had been released by the government to 27 RRBs for its recapitalisation.

Suggestions to Raise the Degree of Viability of Regional Rural Banks:

In order to raise the degree of viability of regional rural banks, some suggestions may be advanced in the following manner:

1. As suggested by CRAFICARD, the areas of operation of a RRB branch never offer sufficient potential for business and thus to attain viability this branches may cover the neighbouring districts. But the chances of extending

this area of operation are very remote due to the introduction of the programme of Service Area Approach.

2. Within the service area, the RRBs must be allowed to finance the project of non-target groups after meeting the credit needs of target groups. Although CRAFICARD and Kelkar Committee did not favour the idea of RRBs financing non-target groups but recommended to lend to those public bodies established for the benefit and welfare of weaker sections.

3. In order to increase the resource base, the RRBs may be permitted to open their branches in the semi-urban and urban areas having larger business potential. Such branches will help the RRBs to mobilise the much needed resources required to meet rural obligations.

4. In order to diversify their deposit base, RRBs may be permitted to tap NRI deposits in those areas when they have such potential.

5. District administration should help the RRBs to recover the overdue loan amounts as the present recovery percentage remains as low as 23 per cent.

Reforms of Regional Rural Banks:

In line with the reform of the banking system, Expert Groups were constituted to examine the major issue concerning managerial and financial restructuring of Regional Rural Banks (RRBs) to devise future course of action in their further reorganization, and to study the role which could be assigned to self-help groups and NGOs in improving the rural credit delivery system.

To ensure that the restructuring of RRBs is sustained and durable, prudential norms were introduced, in 1996 along the lines of those for commercial banks. RRBs will be required to adopt new income recognition norms and exposure limits for borrowers. Provisioning norms were introduced from the year 1996-97.

Consolidation of Regional Rural Banks:

The Government has taken the initiative of consolidating Regional Rural Banks (RRBs) sponsored by the same bank within a state. This would widen the sphere and area of banks' operation and strengthen their functioning with a view to increase the flow of credit in the rural areas.

In terms of Section 23 of the Regional Rural Banks Act, 1976, the sponsor bank NABARD and the State Governments concerned have already given their concurrence for the proposed amalgamation of 14 RRBs.

Thus the process of merger in 196 RRBs, spread over 14,496 branches in 518 districts in India has quietly begun. A host of PSBs have taken a decision to merge some of their RRBs on a state-wise basis. The Government took systematic merger plan of RRBs on state-wise basis and one RRB started to function in each state province on 31st August, 2005 and as a result, the number of Regional Rural Banks (RRBs) had reduced to 92 from 196 due to amalgamation of RRBs sponsored by the same bank in a state.

The number of loss making RRBs reduced to 15 in 2006-07 from 22 in 2005-06. Of these seven have registered profit during the first half of 2007-08 and the remaining four posted profit by the end of 2007-08. The performance of RRBs has improved considerably as the percentage of their gross NPAs and net NPAs has reduced.

The net Worth of RRBs as a whole increased to Rs 4,545.86 crore as on March 31, 2007 from Rs 3,466.25 crore as on March 31, 2005.

Amalgamation of Regional Rural Banks:

In order to improve the condition of RRBs and also to minimise overhead expenses and also to optimize the use of technology in RRBs, the government has initiated amalgamation of geographically contiguous RRBs in a State.

As a result of this step, the capital base and area of operation of amalgamated RRBs will be enhanced in order to serve their area better with absorption of technology and improved management. Till 1 January 2013, 22 RRBs had already been amalgamated into 9 RRBs.

11.4. Co-operative Banks

Cooperative Banking in India: History, Structure, Importance and Weaknesses

In this article we will discuss about:- 1. Meaning of Cooperative Bank 2. History of Cooperative Banking in India 3. Structure 4. Evaluation 5. Weaknesses Reserve Bank and Cooperative Banking.

Meaning of Cooperative Bank:

Cooperative bank is an institution established on the cooperative basis and dealing in ordinary banking business. Like other banks, the cooperative banks are founded by collecting funds through shares, accept deposits and grant loans.

The cooperative banks, however, differ from joint stock banks in the following manner:

(i) Cooperative banks issue shares of unlimited liability, while the joint stock banks issue shares of limited liability.

(ii) In a cooperative bank, one shareholder has one vote whatever the number of shares he may hold. In a joint stock bank, the voting right of a shareholder is determined by the number of shares he possesses.

(iii) Cooperative banks are generally concerned with the rural credit and provide financial assistance for agricultural and rural activities. Joint stock companies are primarily concerned with the credit requirements of trade and industry.

(iv) Cooperative banking in India is federal in structure. Primary credit societies are at the lowest rung. Then, there are central cooperative banks at the district level and state cooperative banks at the state level. Joint stock banks do not have such a federal structure.

(v) Cooperative credit societies are located in the villages spread over entire country. Joint stock banks and their branches mainly concentrate in the urban areas, particularly in the big cities

History of Cooperative Banking in India:

Cooperative movement in India was started primarily for dealing with the problem of rural credit. The history of Indian cooperative banking started with the passing of Cooperative Societies Act in 1904. The objective of this Act was to establish cooperative credit societies "to encourage thrift, self-help and cooperation among agriculturists, artisans and persons of limited means."

Many cooperative credit societies were set up under this Act. The Cooperative Societies Act, 1912 recognised the need for establishing new organisations for supervision, auditing and supply of cooperative credit. These organisations were- (a) A union, consisting of primary societies; (b) the central banks; and (c) provincial banks.

Although beginning has been made in the direction of establishing cooperative societies and extending cooperative credit, but the progress remained unsatisfactory in the pre-independence period. Even after being in operation for half a century, the cooperative credit formed only 3.1 per cent of the total rural credit in 1951-52.

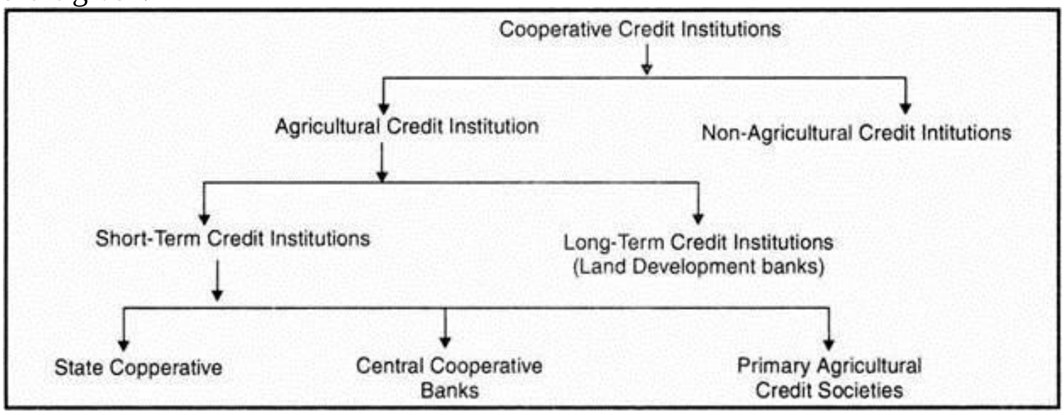
Structure of Cooperative Banking:

There are different types of cooperative credit institutions working in India. These institutions can be classified into two broad categories- agricultural and non-agricultural. Agricultural credit institutions dominate the entire cooperative credit structure.

Agricultural credit institutions are further divided into short-term agricultural credit institutions and long-term agricultural credit institutions.

The short-term agricultural credit institutions which cater to the short-term financial needs of agriculturists have three-tier federal structure- (a) at the apex, there is the state cooperative bank in each state; (b) at the district level, there are central cooperative banks; (c) at the village level, there are primary agricultural credit societies.

Long-term agricultural credit is provided by the land development banks. The whole structure of cooperative credit institutions is shown in the chart given.



Short-Term Rural Cooperative Credit Structure:

In rural India, there exists a 3-tier short-term rural cooperative structure. Tier-I includes state cooperative banks (SCBs) at the state level; Tier-II includes central cooperative banks (CCBs) at the district level; and Tier- III includes primary agricultural credit societies (PACSs).

In 19 states, there exists a 3-tier short-term cooperative credit structure, comprising SCBs, CCBs and PACSs. And in 12 states, there exists a 2-tier

short-term cooperative structure. In the north-eastern states, including Sikkim, the structure is 2-tier, comprising only SCBs and PACSs.

As on March 31, 2013, the number of SCBs was 31, of CCBs was 370 and of PACSs was 92432. As on March 31, 2012, the loans advanced by SCBs were Rs. 75600 crore, by CCBs were Rs. 14400 crore and by PACSs were Rs. 91200 crore.

1. State Cooperative Banks (SCBs):

Functions and Organisation:

State cooperative banks are the apex institutions in the three-tier cooperative credit structure, operating at the state level. Every state has a state cooperative bank.

State cooperative banks occupy a unique position in the cooperative credit structure because of their three important functions:

(a) They provide a link through which the Reserve Bank of India provides credit to the cooperatives and thus participates in the rural finance,

(b) They function as balancing centers for the central cooperative banks by making available the surplus funds of some central cooperative banks. The central cooperative banks are not permitted to borrow or lend among themselves,

(c) They finance, control and supervise the central cooperative banks, and, through them, the primary credit societies.

Capital:

State cooperative banks obtain their working capital from own funds, deposits, borrowings and other sources:

(i) Own funds include share capital and various types of reserves. Major portion of the share capital is raised from member cooperative societies and the central cooperative banks, and the rest is contributed by the state government. Individual contribution to the share capital is very small;

(ii) The main source of deposits is also the cooperative societies and central cooperative banks. The remaining deposits come from individuals, local bodies and others.

(iii) Borrowings of the state cooperative banks are mainly from the Reserve Bank and the remaining from state governments and others.

Loans and Advances:

State cooperative banks are mainly interested in providing loans and advances to the cooperative societies. More than 98 per cent loans are granted to these societies of which about 75 per cent are for the short-period. Mostly the loans are given for agricultural purposes.

The number of state cooperative banks rose from 15 in 1950-51 to 21 in 1960-61 and to 28 in 1991-92. The loans advanced by these banks increased from Rs. 42 crore in 1950-51 to Rs. 260 crore in 1960-61, and further to Rs. 7685 crore in 1991-92.

2. Central Cooperative Banks (CCBs):

Functions and Organisation:

Central cooperative banks are in the middle of the three-tier cooperative credit structure.

Central cooperative banks are of two types:

(a) There can be cooperative banking unions whose membership is open only to cooperative societies. Such cooperative banking unions exist in Haryana, Punjab, Rajasthan, Orissa and Kerala.

(b) There can be mixed central cooperative banks whose membership is open to both individuals and cooperative societies. The central cooperative banks in the remaining states are of this type. The main function of the central cooperative banks is to provide loans to the primary cooperative societies. However, some loans are also given to individuals and others.

Capital:

The central cooperative banks raise their working capital from own funds, deposits, borrowings and other sources. In the own funds, the major portion consists of share capital contributed by cooperative societies and the state government, and the rest is made up of reserves.

Deposits largely come from individuals and cooperative societies. Some deposits are received from local bodies and others. Deposit mobilisation by the central cooperative banks varies from state to state.

For example, it is much higher in Gujarat, Punjab, Maharashtra, and Himachal Pradesh, but very low in Assam, Bihar, West Bengal and Orissa. Borrowings are mostly from the Reserve Bank and apex banks.

Loans and Advances:

The number of central cooperative banks in 1991-92 was 361 and the total amount of loans advanced by them in 1991-92 stood at Rs. 14226 crore. About 98 per cent loans are received by the cooperative societies and about 75 per cent loans are short-term. Mostly the loans are given for agricultural purpose.

About 80 per cent loans given to the cooperative societies are unsecure and the remaining loans are given against the securities such as merchandise, agricultural produce, immovable property, government and other securities etc.

Problem of Overdues:

The most distressing feature of the functioning of the central cooperative banks is heavy and increasing overdue loans. In 1997-98, the percentage of overdues to demand at the central cooperative level was 34.

According to the Review of the Cooperative Movement in India, 1974-76, by the Reserve Bank of India, the main causes of these overdues are:

(a) Natural calamities such as floods, draughts, etc., affecting the repaying capacity of the borrowers;
(b) Inadequate and inefficient supervision exercised by the banks;
(c) The poor quality and management of societies and banks;
(d) Absence of linking of credit with marketing;
(e) Reluctance to coercive measures; and
(f) Where coercive measures were taken, the inability of the machinery to promptly execute the decrees.

For the rehabilitation of the weak Central cooperative banks, the Central Sector Plan Scheme has been formulated under which semi financial help is given to write off the bad debts, losses and irrecoverable overdues against small and marginal farmers.

3. Primary Agricultural Credit Societies (PACSs):

Functions and Organisation:

Primary agricultural credit society forms the base in the three-tier cooperative credit structure. It is a village-level institution which directly deals with the rural people. It encourages savings among the agriculturists, accepts deposits from them, gives loans to the needy borrowers and collects repayments.

It serves as the last link between the ultimate borrowers, i.e., the rural people, on the one hand, and the higher agencies, i.e., Central cooperative bank, state cooperative bank, and the Reserve Bank of India, on the other hand.

A primary agricultural credit society may be started with 10 or more persons of a village. The membership fee is nominal so that even the poorest agriculturist can become a member.

The members of the society have unlimited liability which means that each member undertakes full responsibility of the entire loss of the society in case of its failure. The management of the society is under the control of an elected body.

Capital:

The working capital of the primary credit societies comes from their own funds, deposits, borrowings and other sources. Own funds comprise of share capital, membership fee and reserve funds. Deposits are received from both members and non- members. Borrowings are mainly from central cooperative banks.

In fact, the borrowings form the chief source of working capital of the societies. Normally, people do not deposit their savings with the cooperative societies because of poverty, low saving habits, and non--availability of better assets to the savers in term of rate of return and riskiness from these societies.

Coverage:

In 1999-2000 there were 88 thousand primary agricultural societies covering more than 96 per cent rural areas. The membership of these societies was 8.68 crore. During the past few decades, the Reserve Bank in collaboration with State governments, has been taking various measures to reorganise the viable primary credit societies and to amalgamate non-viable societies with large-sized multipurpose societies.

This work of reorganisation of primary societies into strong and viable units has been completed in almost all the states except Gujrat, Maharashtra, and Jammu and Kashmir. It is because of reorganisation that the number of primary societies which increased from 105 thousand in 1950-51 to 212 thousand in 1960- 61, declined to 92 thousand in 1999-2000.

Loans Advanced:

The loans advanced by the primary credit societies have been Showing 3 Continuously increasing trend. They rose from Rs. 23 crore in 1950-51 to Rs. 202 crore in 1960-61 and further to Rs. 13600 crore in 1999-2000.

Only the members of the societies are entitled to get loans from them. Most of the loans are short-term loans and are for agricultural purposes. Low interest rates are charged on the loans.

The societies are expected to increase amounts of loans to the weaker sections of the rural community, particularly the small and marginal farmers. There, however, exists a serious problem of overdue loans of the societies which have increased from Rs. 6 crores in 1950-51 to Rs. 44 crore in 1960-61 and to Rs. 2875 crore in 1991-92.

Land Development Banks (LDBs) or Cooperative Agricultural and Rural Development Banks (CARDBs):

Besides short-term credit, the agriculturists also need long-term credit for making permanent improvements in land, for repaying old debts, for purchasing agricultural machinery and other implements. Traditionally, the

long-term requirements of agriculturists were mainly met by money lenders and some other agencies. But this source of credit was found defective and has been responsible for the exploitation of farmers.

Cooperative banks and commercial banks by their very nature are not in a position to provide long-term loans because their deposits are mainly demand (short-term) deposits. Thus, there was a great need for a specialised institution for supplying long-term credit to agriculturists. The establishment of land development banks now known as cooperative and rural development banks (CARDBs) is an effort in this direction.

Structure:

The land development banks are registered as cooperative societies, but with limited liability.

These banks have two-tier structure:

(a) At the state level, there are state or central land development banks, now known as state cooperative agricultural and rural development banks (SCARDBs) generally one for each state. They were previously known as central land mortgage banks,

(b) At the local level, there are branches of the state land development banks or SCARDBs and primary land development banks now known as primary cooperative agricultural and rural development banks (PCARDBs).

In some states, there are no primary land development banks, but the branches of the state land development bank. In Madhya Pradesh, the state cooperative bank itself functions as the state land development bank. In other states like Andhra Pradesh, Kerala and Maharashtra, there are more than one state land development banks.

Similarly, the primary land development banks also vary organisationally in different states. At the national level, the land development banks have also formed a union, called All-India Land Development Banks' Union.

Capital:

Land development banks raise their funds from share capital, reserves, deposits, loans and advances, and debentures. Debentures form the biggest source of finance. The debentures are issued by the state land development banks.

They carry fixed interest, have maturity varying from 20 to 25 years, and are guaranteed by the state government. These debentures are subscribed by the co-operative banks, commercial banks, the State Bank of India and the Reserve Bank of India.

Besides the ordinary debentures, the land development banks also float rural debentures for the period upto 7 years. These debentures are subscribed by farmers, panchayats, and the Reserve Bank. The Reserve Bank substantially contributes to the finance of land development banks by extending funds to the state governments for contributing to the share capital of these banks and by subscribing to ordinary and rural debentures.

Growth:

In India, the first cooperative land mortgage bank was organised in Jhang in Punjab in 1920.But the effective beginning was made in Madras with the establishment of a central land development bank in 1929. Later on other states also established such institutions.

The number of state cooperative agricultural and rural development banks (SCARDBs) which was 5 in 1950-51, rose to 20 in 2013. The number

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of primary cooperative agricultural and rural development banks (PCARDBs) was 697 in 2013.

Loans and Advances:

The land development banks or SCARDBs provide long-term loans to the agriculturists- (a) for redemption of old debt, (b) for improvement of land and methods of cultivation, (c) purchasing costly machinery, and (d) in special cases, for purchasing land. These banks grant loans against the mortgage of land and the period of loan varies from 15 to 30 years.

In 1999-2000, the loans sanctioned by these banks were Rs.2520 crore and the amount of loans outstanding was Rs. 11670 crore. The amount of loans outstanding at the end-March 2012 was Rs. 19400 crore by SCARDBs and Rs.12000 crore by PCARDBs.

Defects of Land Development Banks:

Although numerically the land development banks have grown over the years, they have not been able to make much progress in providing long-term finance to the farmer.

The following are the factors responsible for the unsatisfactory performance of land development banks:

i. Uneven Growth:

There has been uneven growth of land development banks. These have shown some progress in the states like Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra, Gujrat. Other states have made very little progress. About half of the states have no land development bank.

ii. Problem of Overdues:

The major problem faced by the land development banks is the existence of heavy overdues. Moreover, the overdues are continuously rising over the years. In 1991-92, the percentage of the overdues 6f the land development banks has been put between 42 to 44 per cent.

Faulty loaning policies, inadequate supervision, over-utilisation of loans, ineffective measures for recovery, willful defaulters, etc. are the main causes of unsatisfactory level of overdues. In view of the seriousness of the problem, the state governments have been advised to draw up and implement time-bound programmes for special recovery drives.

iii. Lack of Trained Staff:

In spite of quantitative growth of the land development banks, they have not shown much qualitative improvements in the field of granting loans largely due to inadequate technical and supervisory staff. Necessary changes in the legislation of cooperative institutions are also required if the lending activities are to be diversified for non-traditional developmental purposes and on the basis of non-landed security.

iv. Other Defects:

Other defects of the land development banks can be summarised below:

(a) These banks charge very high interest rates on the loans provided by them.

(b) There is much delay and red-tapism in the granting of loans,

(c) Second loan is not advanced unless the first is not repaid.

(d) Installments and the period of loans are not fixed on the basis of the repaying capacity of the borrowers.

(e) The procedure of receiving a loan from these banks is so complicated that the agriculturist is forced to seek help from the money lender,

(f) Weaker sections of the rural society such as landless labourers, village artisans and marginal farmers, are generally unable to secure loans from

these banks for their productive activities simply because they do not have land or adequate security to offer against loans.
(g) Mostly loans are given for the repayment of old loans and for development purposes.

v. Report of Rural Credit Survey:
The Report of the Committee of Direction of All-India Rural Credit Survey has pointed out the unsatisfactory performance of the land mortgage banks (now called the land development banks) in the following manner:
(a) These banks raise inadequate funds in a manner ill-rated to demand and usually lend them in a manner uncoordinated with development;
(b) They act as if prior debts and not production had claim on its attention; and
(c) They reach only the large cultivator and reach him late.
Evaluation of Cooperative Banking:
Progress of Cooperative Credit:

As a result of effective steps taken by the government and the Reserve Bank of India, the cooperative banking system in India made tremendous progress after independence. The cooperative credit which was only 3.1 per cent of the total rural credit in 1951-52, rose to 15.5% in 1961-62 and to 22.7 per cent in 1970-71.

The total amount of short-term credit granted by the cooperatives increased from Rs. 23 crore in 1951 -52 to Rs. 203 crore in 1961-62 and further to Rs. 1425 crore in 1979-80. Thus, during the period of about two decades (i.e., 1960-61 to 1979- 80), the short-term and medium-term loans increased by more than seven times.

Table 1. Progress of Cooperative Credit

(in Rs. crores)

Programme	1985-86	1995-96	1999-2000	2002-03
1. Short-term loans	2787	8331	14845	20247
2. Medium-term loans	505] 1087	] 1087	] 1087	] 1087
3. Long-term loans	582			
Total	3874	10479	18363	24296

Table 1 shows that cooperative credit increased significantly from Rs. 3874 crore in 1985-86 to Rs. 10479 crore in 1995-96, and further to Rs. 24296 crore in 2002-03. Short-term cooperative credit increased from Rs. 2787 crore in 1985-86 to Rs. 8331 crore in 1995-96 and to Rs. 20247 crore in 2002-03. Medium-term and long-term cooperative loans increased from Rs. 1087 crore in 1985-86 to Rs. 2148 crore in 1995-96 and to Rs. 4049 crore in 2002-03.

Table 2. Institutional Credit to Agriculture

(Rs. crores)

Agricultural Credit	2002-03	(%)	2006-07	(%)	2009-10	(%)
1. Cooperative Banks	23716	(34)	33174	(22)	32925	(20)
2. RRBs	6070	(9)	15170	(10)	20065	(12)
3. Commercial Banks	39774	(57)	100999	(68)	112449	(68)
4. Total (1 + 2 + 3)	69560	(100)	149343	(100)	165439	(100)

Table-2 shows that during 10th Five Year Plan (2002-03 to 2006-07), agricultural credit from cooperative banks increased from Rs. 23716 crore (34%) to Rs. 33174 crore (22%). In 2009-10, it was Rs. 32925 crore (20%).

Importance of Cooperative Banks:

The cooperative banking system has to play a critical role in promoting rural finance and is specially suited to Indian conditions.

Various advantages of cooperative credit institutions are given below:

I. Alternative Credit Source:

The main objective of cooperative credit movement is to provide an effective alternative to the traditional defective credit system of the village money lender. The cooperative banks tend to protect the rural population from the clutches of money lenders. The money lenders have so far dominated the rural areas and have been exploiting the poor people by charging very high rates of interest and manipulating accounts.

II. Cheap Rural Credit:

Cooperative credit system has cheapened the rural credit both directly as well as indirectly:

(a) Directly, because the cooperative societies charge comparatively low interest rates, and

(b) Indirectly, because the presence of cooperative societies as an alternative agency has broken money lender’s monopoly, thereby enforcing him to reduce the rate of interest.

III. Productive Borrowing:

An important benefit of cooperative credit system is to bring a change in the nature of loans. Previously the cultivators used to borrow for consumption and other unproductive purposes. But, now, they mostly borrow for productive purposes. Cooperative societies discourage unproductive borrowing.

IV. Encouragement to Saving and Investment:

Cooperative credit movement has encouraged saving and investment by developing the habits of thrift among the agriculturists. Instead of hoarding money the rural people tend to deposit their savings in the cooperative or other banking institutions.

V. Improvement in Farming Methods:

Cooperative societies have also greatly helped in the introduction of better agricultural methods. Cooperative credit is available for purchasing improved seeds, chemical fertilizers, modern implements, etc. The marketing and processing societies have helped the members to purchase their inputs cheaply and sell their produce at good prices.

VI. Role of Cooperative Banks before 1969:

Till the nationalisation of major commercial banks in 1969, cooperative societies were practically the only institutional sources of rural credit. Commercial banks and other financial institutions hardly provided any credit for agricultural and other rural activities. Cooperative credit to the agriculturists as a percentage of total agricultural credit increased from 3.1 per cent in 1951-52 to 15.5 per cent in 1961-62 and further to 22.7 per cent in 1970-71.

On the other hand, the agricultural credit provided by the commercial banks as a percentage of total agricultural credit remained almost negligible and fell from 0.9 percent in 1951-52 to 0.6 percent in 1961-62 and then rose to 4 per cent in 1970-71.

VII. Role of Cooperative Banks after 1969:

After the nationalisation of commercial banks in 1969, the government has adopted a multi-agency approach. Under this approach, both cooperative banks and commercial banks (including regional rural banks) are being developed to finance the rural sector.

But, this new approach also recognised the prime role to be played by the cooperative credit institutions in financing rural areas because of the following reasons:

(a) Co-operative credit societies are best suited to the socio-economic conditions of the Indian villages.

(b) A vast network of the cooperative credit societies has been built over the years throughout the length and breadth of the country. This network can neither be duplicated nor be surpassed easily.

(c) The cooperative institutions have developed intimate knowledge of the local conditions and problems of rural areas.

VIII. Suitable Federal Structure of Cooperative Banking System:

Cooperative banking system has a federal structure with- (a) primary agricultural credit societies at the village level, (b) higher financing agencies in the form of central cooperative and state cooperative banks, (c) land development banks for providing long- term credit for agriculture. Such a banking structure is essential and particularly suited for effectively meeting the financial requirements of the vast rural areas of the country.

Considering the great importance of cooperative banks, particularly in the rural areas, it is not surprising that every committee or commission, that has examined the working of the cooperative banking system in India, has expressed the common view that "cooperation remains the best hope of rural India."

Weaknesses of Cooperative Banking:

Various committees, commissions and individual studies that have reviewed the working of the cooperative banking system in India have pointed out a number of weaknesses of the system and have made suggestions to improve the system.

Major weaknesses are given below:

I. General Weaknesses of Primary Credit Societies:

Organisational and financial limitations of the primary credit societies considerably reduce their ability to provide adequate credit to the rural population.

The All India Rural Credit Review Committee pointed out the following weaknesses of the primary credit societies:

(a) Cooperative credit still constitutes a small proportion of the total borrowings of the farmers,

(b) Needs of tenants and small farmers are not fully met.

(c) More primary credit societies are financially weak and are unable to meet the production-oriented credit needs,

(d) Overdues are increasing alarmingly at all levels,

(e) Primary credit societies have not been able to provide adequate and timely credit to the borrowing farmers.

II. Inadequate Coverage:

Despite the fact that the cooperatives have now covered almost all the rural areas of the country, its rural household membership is only about 45 per cent. Thus, 55 per cent of rural households are still not covered under the cooperative credit system.

In fact, the borrowing membership of the primary credit societies is significantly low and is restricted to a few states like Maharashtra, Gujrat, Punjab, Haryana, Tamil Nadu and to relatively rich land owners.

Criteria of determining borrowing membership include:

(a) Borrowing members as a proportion of rural households,

(b) The average amount of loan issued per borrowing member, and

(c) The proportion of loans going to weaker sections.

The banking Commission 1972 has brought out the following reasons for the low borrowing membership cooperative societies:

(a) Inability of the people to provide the prescribed security;

(b) Lack of up-to-date land records;

(c) Ineligibility of certain purposes for loans;

(d) Inadequacy of prescribed credit limits;

(e) Onerous conditions prescribed for loans such as share capital contribution at 10 or 20 per cent of loans outstanding and compulsory saving deposits; and

(f) Default of members to repay loans.

III. Inefficient Societies:

In spite of the fact that the primary agricultural credit societies in most of the states have been reorganised into viable units, their loaning business has not improved. As the Seventh Plan has observed that out of 94089 primary agricultural credit societies in the country in 1982-83, only 66000 societies had full time paid secretaries. About 34000 societies were running at loss.

IV. Problem of Overdues:

A serious problem of the cooperative credit is the overdue loans of the cooperative institutions which have been continuously increasing over the years. In 1991-92, percentage of overdues to demand at the level of land development banks was 57, at the level of central cooperative banks was 41 and at the level of primary agricultural credit societies was 39.

The overdues in the short-term credit structure are most alarming in North-Eastern States. In the long-term loaning sector, the problem of overdues has almost crippled the land development banks in 9 states, viz., Maharashtra, Gujarat, Madhya Pradesh, Bihar, Karnataka, Assam, West Bengal, Orissa and Tamil Nadu.

Large amounts of overdues restrict the recycling of the funds and adversely affect the lending and borrowing capacity of the cooperative societies.

The Banking Commission 1972 pointed out the following reasons for the overdue loans:

(a) Indifferent management or mismanagement of primary societies;

(b) Unsound lending policies resulting in over-lending or lending unrelated to actual needs, diversions of loans for other purposes;

(c) Vested interests and group politics in societies and willful defaulters;

(d) Inadequate supervision over the use of loans and poor recovery efforts;

(e) Lack of adequate control of central cooperative banks over primary societies;

(f) Lack of proper links between credit and marketing institutions;

(g) Failure to take quick action against willful defaulters; and

(h) Uncertain agricultural prices.

V. Regional Disparities:

There have been large regional disparities in the distribution of cooperative credit. According to the Seventh Plan, the eight states of Andhra Pradesh, Gujarat, Haryana, Kerala, Madhya Pradesh, Maharashtra, Punjab and Rajasthan account for about 80 per cent of the total credit disbursed. The per hectare short-term credit disbursed varied from Rs. 4 in Assam to Rs. 718 in Kerala.

VI. Benefits to Big Land Owners:

Most of the benefits from the cooperatives have been covered by the big land owners because of their strong socio-economic position. For instance, in 1984-85 the farmers having holdings less than two hectares got only 38.8 per cent of the total loans granted by the primary agricultural credit societies, whereas the land owners with holdings of more than 2 hectare received 55 per cent. The share of the poorest rural population (i.e. tenants, share croppers and landless labours) was only 6.2 per cent.

VII. Lack of Other Facilities:

Besides the provision of adequate and timely credit, the small and marginal farmers also need other facilities in the form of supply of inputs (i.e., better seeds, fertilisers, pesticides, etc), extension and marketing services.

These facilities will enable them to utilise the borrowed credit in a proper way. Therefore, the credit societies should be reorganised into multi-purposes cooperatives.

Reserve Bank and Cooperative Banking:

Strengthening the cooperative credit movement has been the Reserve Bank of India's special responsibility ever since its establishment in 1935.

The following are the various measures undertaken by the Reserve Bank to develop cooperative banking system and to promote cooperative finance in the country:

1. Agricultural Credit Department:

The Reserve Bank has a separate Agricultural Credit Department whose functions are:

(i) To maintain an expert staff to study all questions of agricultural credit and be available for consolation by the central and state governments, state cooperative banks and other banking organisations; and

(ii) To coordinate the operations of the Reserve Bank in connection with agricultural credit and relations with the state cooperative banks and other institutions engaged in the business of agricultural credit.

2. All-India Rural Credit Survey:

The Reserve Bank's real role in the cooperative credit movement started with the appointment of All-India Rural Credit Survey Committee in 1951. The objective of this Committee was to study the problems of rural credit and explore possibilities of expanding agricultural credit through cooperative credit system.

The committee submitted its report in December 1954 which highlighted the vital importance of cooperative rural credit.

The Committee found that while private credit agencies, i.e., money lenders and traders supply 70 per cent of the rural credit, the cooperative societies provided only 3 per cent of the total borrowed amount.

The Committee observed that the rural credit in India fell short of the right quantity, was not of right type, did not serve the right purpose, and often fail to go to the right people. Regarding the future of cooperative credit

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movement the committee said, "cooperation had failed, but cooperation must succeed."

3. Integrated Scheme of Rural Credit:

For the success of cooperative credit movement, the Survey Committee suggested an integrated scheme of rural credit based on the following fundamental principles- (a) state partnership in cooperative credit institutions; (b) full coordination between credit and other agricultural activities, particularly, marketing and processing; and (c) administration through adequately trained and efficient personnel, responsive to the needs of the rural population.

4. Provision of Finance:

In pursuance of the recommendations of the Survey Committee and the later committees like the Committee on Cooperative Credit (1960), the Reserve Bank has activity helped the cooperative system to expand rural credit. The Reserve Bank does not provide finance directly to the agriculturists, but only through cooperative sector.

The Reserve Bank provides financial assistance for meeting short-term, medium-term and long-term rural needs.

The needs are explained as under:

(i) Short-Term Finance:

The Reserve Bank provides short-term finance to the state cooperative banks in two ways- (a) through loans and advances; (b) through rediscounting facility. The financial assistance is given for seasonal agricultural operations and for marketing of crops.

In 1950-51, the Reserve Bank sanctioned short- term credit of Rs. 7.6 crore. This amount increased to Rs. 147 crore in 1960-61 and to Rs. 1090 crore in 1981-82.

(ii) Medium-Term Finance:

The Reserve Bank provides medium-term loans to state cooperative banks generally for 3 to 5 years. These loans are provided for- (a) land improvements like bunding, digging of wells and water channels; (b) repair of wells and other irrigational schemes; (c) purchase of livestock, implements and machinery; (d) construction of farm houses and cattle sheds.

The Reserve Bank also provides medium-term loans in scarcity affected areas. Over the years, the amount of medium- term loans sanctioned by the Reserve Bank has considerably increased from Rs. 27 lakh in 1954-55 to Rs. 24 crore in 1970-71 and to Rs. 110 crore in 1981-82.

(iii) Long-Term Finance:

The Reserve Bank provides long-term financial assistance for a maximum period of 20 years for agriculture in there ways- (a) It subscribes a portion of debentures issued by the land development banks. (b) It grants long term loans to such banks, (c) It grants loans to state governments for subscribing to the share capital of cooperative credit institutions. The total long- term loans sanctioned by the Reserve Bank were Rs. 212 crore in 1981-82.

5. Setting Up of Funds:

To meet its financial obligations, the Reserve Bank set up two national funds in 1956, i.e., the National Agricultural Credit (Long-Term Operations) Funds, and the National Agricultural Credit (Stabilisation) Fund.

The Purpose of the Long-Term Operations Funds was- (a) to make long- term loans available to state governments to enable them to subscribe

the share capital of cooperative credit institutions; (b) to make medium-term loans to state cooperative banks for agricultural purposes; (c) to make long-term loans to the central land mortgage banks against the guarantee of the state government; and (d) to purchase debentures of central land mortgage banks against the guarantee of state government. The Stabilisation Fund helps the state cooperative banks to convert their short-term loans into medium-term loans in cases of draught, famine or other calamities.

6. Strengthening of Cooperative Banking Structure:

With a view to strengthen cooperative banking structure and promote cooperative credit, the Reserve Bank undertakes the following measures:

(i) It pays special attention towards rehabilitating and revitalising the weaker cooperative units.

(ii) It makes arrangements for maintaining the flow of cooperative credit by involving commercial banks to finance the primary agricultural societies.

(iii) It makes efforts in improving the lending policies and operational efficiency of cooperative credit institutions.

(iv) It provides financial accommodation to cooperative credit institutions.

(v) It conducts special training courses at the Cooperative Bankers' Training Colleges for the personnel of state, central and urban banks.

11.5.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is RBI?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What are the functions of NABARD?

11.6.Answer to check your progress Questions.

5. The Reserve Bank of India (RBI) is the central bank of India, which was established on April 1, 1935, under the Reserve Bank of India Act. The Reserve Bank of India uses monetary policy to create financial stability in India, and it is charged with regulating the country's currency and credit systems.

2.Functions of NABARD:

- 2 Frames the policy for rural credit in the country for all financing institutions
- National Bank for Agriculture and Rural Development will itself provide finance and refinancing facilities to the banks and rural regional banks
- Identification of credit potential and preparation of the credit plans for all districts

11.7. Summary

In this unit, you have learnt about the meaning definition objective and importance of NARARD and RRB This knowledge would make you understand what in NABARD and RRB and how it can be worked at a Indian monetary system. The concept such as RRB and banks would have made you to distinguish these activities from the Indian monetary activities and you might have learnt about the meanings and its functions in the monetary system.

11.8.Key words

National Agricultural Credit, long-term financial assistance

11.9.Self Assessment Questions and Exercises.

Short Answer Questions

1.What is RBI?

2.What are the Functions of NABARD?

Long answer Questions

1.Explain the Indian Monetary Systems RBI and NABARD

2. Detail the RRB and Co-operative Banks.

11.10.Further Readings

Kurihara, KK(1950), "**Monetary Theory and Public Policy**", Norton Digitised, 2007.

Notes

UNIT-12: BANK WEBSITES:

12.1.Recent Publications on the websites of Finance Ministry of India

Publications

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12.2.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is Public Division?

……………………………

……………………………………

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is Finance Private Policy?

12.3.Answer to check your progress Questions.

1. The Publications Division (PD), one of the leading publishing houses in the Country and the largest in the public sector, functions under the Ministry of Information and Broadcasting. It attempts to promote National Integration by disseminating information and creating awareness about the various activities, regions, people and the myriad cultures & beliefs of the Nation.

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12.4.Summary

In this unit, you have learnt about the meanings importance of bank website and recent publications websites of finance ministry of India This knowledge would make you understand what are the importance of bank website and how it can be worked at a finance ministry of India. The concept such as banks and publications on the websites of finance

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ministry on India.

12.5.Key words

Copyright, accuracy

12.6.Self Assessment Questions and Exercises.

Short Answer Questions

1. What is Public Division?

2. What is Finance Private Policy?

Long answer Questions.

1.Explain Recent Publications on the websites of Finance Ministry of India.

2.Detail about the Recent Publications on the websites of Finance Ministry of India.

12.7.Further Readings

Ghosh and Rama Ghosh, (1985), "**Fundamentals of Monetary Economics"** **,**2nd Edition, Himalaya Publishing House, Mumbai.

BLOCK IV: REFORMS IN MONETARY SYSTEMS

UNIT-13: FINANCIAL COMMITTEE:

13.1.Narasimhan Committee Report and Raguram Rajan's Committee Report on Monetary Reforms

NARASIMHAN COMMITTEE REPORT

To promote the healthy development of the financial sector, the Narasimhancommittee made recommendations.

Recommendations of Narasimhan Committee

1. Establishment of 4 tier hierarchy for banking structure with 3 to 4 large banks (including SBI) at the top and at bottom rural banks engaged in agricultural activities.

2. The supervisory functions over banks and financial institutions can be assigned to a quasi-autonomous body sponsored by RBI.

3. A phased reduction in statutory liquidity ratio.

4. Phased achievement of 8% capital adequacy ratio.

5. Abolition of branch licensing policy.

6. Proper classification of assets and full disclosure of accounts of banks and financial institutions.

7. Deregulation of Interest rates.

8. Delegation of direct lending activity of IDBI to a separate corporate body.

9. Competition among financial institutions on participating approach.

10. Setting up Asset Reconstruction fund to take over a portion of the loan portfolio of banks whose recovery has become difficult.

Banking Reform Measures of Government: –

On the recommendations of Narasimhan Committee, following measures were undertaken by government since 1991: –

1. Lowering SLR and CRR

The high SLR and CRR reduced the profits of the banks. The SLR had been reduced from 38.5% in 1991 to 25% in 1997. This has left more funds with banks for allocation to agriculture, industry, trade etc.

The Cash Reserve Ratio (CRR) is the cash ratio of banks total deposits to be maintained with RBI. The CRR had been brought down from 15% in 1991 to 4.1% in June 2003. The purpose is to release the funds locked up with RBI.

2. Prudential Norms: –

Prudential norms have been started by RBI in order to impart professionalism in commercial banks. The purpose of prudential norms includes proper disclosure of income, classification of assets and provision for Bad debts so as to ensure that the books of commercial banks reflect the accurate and correct picture of financial position.

Prudential norms required banks to make 100% provision for all Non-performing Assets (NPAs). Funding for this purpose was placed at Rs. 10,000 crores phased over 2 years.

3. Capital Adequacy Norms (CAN): –

Capital Adequacy ratio is the ratio of minimum capital to risk asset ratio. In April 1992 RBI fixed CAN at 8%. By March 1996, all public sector banks had attained the ratio of 8%. It was also attained by foreign banks.

4. Deregulation of Interest Rates

The Narasimhan Committee advocated that interest rates should be allowed to be determined by market forces. Since 1992, interest rates have become much simpler and freer.

Scheduled Commercial banks have now the freedom to set interest rates on their deposits subject to minimum floor rates and maximum ceiling rates.

The interest rate on domestic term deposits has been decontrolled.

The prime lending rate of SBI and other banks on general advances of over Rs. 2 lakhs has been reduced.

The rate of Interest on bank loans above Rs. 2 lakhs has been fully decontrolled.

The interest rates on deposits and advances of all Co-operative banks have been deregulated subject to a minimum lending rate of 13%.

5. Recovery of Debts

The Government of India passed the “Recovery of debts due to Banks and Financial Institutions Act 1993” in order to facilitate and speed up

the recovery of debts due to banks and financial institutions. Six Special Recovery Tribunals have been set up. An Appellate Tribunal has also been set up in Mumbai.

6. Competition from New Private Sector Banks

Banking is open to the private sector.
New private sector banks have already started functioning. These new private sector banks are allowed to raise capital contribution from foreign institutional investors up to 20% and from NRIs up to 40%. This has led to increased competition.

7. Access To Capital Market

The Banking Companies (Acquisition and Transfer of Undertakings) Act was amended to enable the banks to raise capital through public issues. This is subject to the provision that the holding of Central Government would not fall below 51% of paid-up-capital. SBI has already raised a substantial amount of funds through equity and bonds.

8. Freedom of Operation

Scheduled Commercial Banks are given freedom to open new branches and upgrade extension counters, after attaining capital adequacy ratio and prudential accounting norms. The banks are also permitted to close non-viable branches other than in rural areas.

9. Local Area Banks (LABs)

In 1996, RBI issued guidelines for setting up of Local Area Banks, and it gave Its approval for setting up of 7 LABs in private sector. LABs will help in mobilizing rural savings and in channelling them into investment in local areas.

10. Supervision of Commercial Banks

The RBI has set up a Board of financial Supervision with an advisory Council to strengthen the supervision of banks and financial institutions. In 1993, RBI established a new department known as Department of Supervision as an independent unit for supervision of commercial banks.

Narasimham Committee Report II – 1998

In 1998 the government appointed yet another committee under the chairmanship of Mr Narsimham. It is better known as the Banking Sector Committee. It was told to review the banking reform progress and design a programme for further strengthening the financial system of India. The committee focused on various areas such as capital adequacy, bank mergers, bank legislation, etc.

It submitted its report to the Government in April 1998 with the following recommendations.

Strengthening Banks in India : The committee considered the stronger banking system in the context of the Current Account Convertibility 'CAC'. It thought that Indian banks must be capable of handling problems regarding domestic liquidity and exchange rate management in the light of

CAC. Thus, it recommended the merger of strong banks which will have 'multiplier effect' on the industry.

Narrow Banking : Those days many public sector banks were facing a problem of the Non-performing assets (NPAs). Some of them had NPAs were as high as 20 percent of their assets. Thus for successful rehabilitation of these banks, it recommended 'Narrow Banking Concept' where weak banks will be allowed to place their funds only in the short term and risk-free assets.

Capital Adequacy Ratio : In order to improve the inherent strength of the Indian banking system the committee recommended that the Government should raise the prescribed capital adequacy norms. This will further improve their absorption capacity also. Currently, the capital adequacy ratio for Indian banks is at 9 percent.

Bank ownership : As it had earlier mentioned the freedom for banks in its working and bank autonomy, it felt that the government control over the banks in the form of management and ownership and bank autonomy does not go hand in hand and thus it recommended a review of functions of boards and enabled them to adopt professional corporate strategy.

Review of banking laws : The committee considered that there was an urgent need for reviewing and amending main laws governing Indian Banking Industry like RBI Act, Banking Regulation Act, State Bank of India Act, Bank Nationalisation Act, etc. This up gradation will bring them in line with the present needs of the banking sector in India.

Apart from these major recommendations, the committee has also recommended faster computerization, technology up gradation, training of staff, depoliticizing of banks, professionalism in banking, reviewing bank recruitment, etc.

RAGURAM RAJANS COMMITTEE REPORTS ON MONETARY REFORMS:

The **RaghuramRajan Committee on Financial Sector Reforms** was a committee constituted by the Government of India in 2007 for proposing the next generation of financial sector reforms in India. It was chaired by University of Chicago economist RaghuramRajan who had earlier been the chief economist at the International Monetary Fund. The committee, in its report titled *A Hundred Small Steps*, recommended broad-based reforms across the financial sector, arguing that instead of focusing "on a few large, and usually politically controversial steps", India must "take a hundred small steps in the same direction"

In 2007, then Deputy Chairman of the Planning Commission, Montek Singh Ahluwalia, drafted Rajan to write a report proposing the next generation of financial sector reforms in India. The mandate that was given was to take an overall view of the sector in making recommendations, highlighting links between needed reforms, while offering a consistent underlying approach.

In favor of Proposal 2 "Steadily open up investment in the rupee corporate and government bond markets to foreign investors after a clear monetary policy framework is in place"

BOND MARKETS REFORMS

Overall Economy o Expands range of opportunities to finance large scale projects at centre, state and corporate level of Infrastructure projects are backbone for economic growth in emerging economies. Bond markets reduce financial strain on banking system. Bond markets provide cost efficient source to medium and long term capital of Extends financial inclusion to SMEs o An easier way to access loans for less credit-worthy borrowers.

FII in Indian Bond Market Measures to boost FII's o RBI has been asked to open a US $10 billion window to allow foreign individuals

- Will encourage flow of money as foreign investors will` be eager to invest in Indian markets
- Possibility of earning higher returns on Indian debt as compared to US/ Europe o Will result in strengthening of the underdeveloped bond market in India Problems due to low FII in Indian Bond Market
- Due to absence of foreign investors, markets are deprived of a large and liquid pool of savings

o India is also being deprived of an active global trading strategy which can contribute to the liquidity woes

Impediments to Foreign Investment in Debt Market FEMA Act and Its Implications of FEMA Act basically provides guidelines for the regulation of foreign exchange in India. One of the primary limitations of the FEMA act is that it permits only authorized person to deal in foreign security i.e. NRIs and SEBI registered FIIs only.

The FEMA Act also sets up upper ceiling on the volumes of investments in Govt. and Corporate Bonds along with some additional restrictions. Measures taken by Finance Ministry to bring in reforms

- In recent times the Finance Ministry has been increasing the upper ceiling on the FIIs in the Govt. and Corporate Bonds.
- These reforms not only aim to increase FIIs in India but is also targeted to address the Current account deficit in India which is running out of control.
- Another key incentive to open up FIIs is the keenness shown by the Foreign pension funds, sovereign funds etc. to invest in Indian debt market since India debt markets give returns to the tune of 8% vs. returns of 3% to 5% in other emerging countries.

The RaghuramRajan Committee Proposal Analysis

- Steadily open up investment in the rupee corporate and government bond markets to foreign investors after a clear monetary policy framework is in place
- Emphasis on clear monetary policy framework as a precursor What would foreign investors be interested

TheRaghuramRajan Committee Proposal Analysis What the Opponents of this proposal will say?

- Rupee Appreciation a genuine concern for some sectors (And RBI) o Funding the rising fiscal deficits is the need of the hour o Small price to pay for creation of market depth and long term monetary stability
- First Step (Yet Again!) towards capital account convertibility and free float of indian rupees

Conclusion – In support for Proposal 2 Steps to achieve the full benefit

Notes

of the committees proposal Create the necessary policy infrastructure to make investing in bond markets lucrative SEBI, RBI and Ministry of Finance need to be in congruence about their goals, locus standi and degree of latitude Create infrastructure for a robust derivatives market for debt securities on the lines of equity markets Enhance Securitization of debt securities. Provide incentives for private players to compete with ARCIL At the government level, ensure adherence to FRBM Act and make future borrowings more rational.

13.2.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What is Capital Adequacy Norms?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What about the narrow banking?

………………………………

13.3.Answer to check your progress Questions.

1. . Capital Adequacy Norms (CAN): –

Capital Adequacy ratio is the ratio of minimum capital to risk asset ratio. In April 1992 RBI fixed CAN at 8%. By March 1996, all public sector banks had attained the ratio of 8%. It was also attained by foreign banks.

2. Narrow Banking : Those days many public sector banks were facing a problem of the Non-performing assets (NPAs). Some of them had NPAs were as high as 20 percent of their assets. Thus for successful rehabilitation of these banks, it recommended 'Narrow Banking Concept' where weak banks will be allowed to place their funds only in the short term and risk-free assets.

13.4.Summary

In this unit, you have learnt about the meanings of Narasimhan committee and Raguram Rajan commitee report. This knowledge would make you understand what is Narasimhan commitee and how it can be worked at a monetary system. The concept such as Narasimhan and

Raguram Rajan would have make you to distinguish these activities from the Financial Committee activities and you might have learnt about the meaning and its functions in the financial context.

13.5.Key words

Bond market, Freedom of Operation

13.6.Self Assessment Questions and Exercises.

Short Answer Questions

1. What is Capital Adequacy Norms?

2.) What about the naroow banking?

Long answer Questions.

1.Explain Financial Committee: Narasimhan Committee Report

2.Explain Raguram Rajan's Committee Report on Monetary Reforms.

13.7.Further Readings

Laidler, David (1993), **"The Demand for Money",** 4th edition. Harper Collins,New York.

UNIT-14: RECENT REFORMS IN MONETARY SYSTEMS IN INDIA:

14.1.Demonetisation of Higher order Money in 2016 and its implications

DEMONETIZATION OF HIGHER ORDER MONEY 2016 AND ITS IMPLICATION

On 8 November 2016, the Government of India announced the demonetization of all □500 and □ 1,000banknotes of the Mahatma Gandhi Series. It also announced the issuance of new □ 500and □ 2,000banknotes in exchange for the demonetised banknotes.[1] The Prime minister of India NarendraModi claimed that the action would curtail the shadow economy and reduce the use of illicit and counterfeit cash to fund illegal activity and terrorism.

The announcement of demonetisation was followed by prolonged cash shortages in the weeks that followed, which created significant disruption throughout the economy.People seeking to exchange their banknotes had to stand in lengthy queues, and several deaths were linked to the rush to exchange cash.

According to a 2018 report from the Reserve Bank of India, approximately 99.3% of the demonetised banknotes, or □ 15.30 lakh crore(15.3 trillion) of the □ 15.41 lakh crorethat had been demonetised, were deposited with the banking system. The banknotes that were not deposited were only worth □ 10,720 crore (107.2 billion),leading analysts to state that the effort had failed to remove black money from the economy. The BSE SENSEX and NIFTY 50 stock indices fell over 6 percent on the day after the announcement. The move reduced the country's industrial production and its GDP growth rate.

Initially, the move received support from several bankers as well as from some international commentators. The move was also criticised as poorly planned and unfair, and was met with protests, litigation, and strikes against the government in several places across India. Debates also took place concerning the move in both houses of the parliament.

The Indian government had demonetised banknotes on two prior

occasions—once in 1946 and once in 1978—and in both cases, the goal was to combat tax evasion via "black money" held outside the formal economic system. In 1978, the Janata Party coalition government demonetised banknotes of □ 1,000, □ 5,000and □ 10,000, again in the hopes of curbing counterfeit money and black money.

In 2012, the Central Board of Direct Taxes recommended against demonetisation, saying in a report that "demonetisation may not be a solution for tackling black money or shadow economy, which is largely held in the form of benami properties, bullion and jewelry. According to data from income tax probes, black money holders kept only 6% or less of their wealth as cash, suggesting that targeting this cash would not be a successful strategy.

DEMONETISATION PROCESS AND ITS IMPLICATION

Demonetised □ 500and □ 1,000banknotes of theMahatma Gandhi Series

Preparation and announcement

The plan to demonetise the □ 500and □ 1,000banknotes was initiated between six and ten months before it was a report by the State Bank of India analysed possible strategies and effects of demonetisation.In May 2016, the Reserve Bank of India had started preparing for new banknotes and confirmed the design of □ 2,000banknotes in August 2016. The printing of new banknotes started in October when the news stories of forthcoming new banknotes appeared in the media. On 27 October 2016, the Hindi daily *DainikJagran* published a report quoting RBI sources speaking of the forthcoming of □ 2,000banknotes alongside withdrawal of □ 500and □ 1,000banknotes.On 21 October 2016, *The Hindu Business Line* had also published a report on forthcoming □ 2,000banknote.

The Union cabinet was informed about the plan on 8 November 2016 in a meeting in the evening called by the Indian Prime Minister NarendraModi. Soon after the meeting, Modi announced the demonetisation in an unscheduled live national televised address at 20:15 IST.He declared circulation of all □ 500and □ 1,000banknotes of the Mahatma Gandhi Series as invalid effective from the midnight of the same day, and announced the issuance of new □ 500and □ 2,000banknotes of the Mahatma Gandhi New Series in exchange for the demonetised banknotes.

The Reserve Bank of India stipulated that the demonetised banknotes could be deposited with banks over a period of fifty days until 30 December 2016. The banknotes could also be exchanged for legal tender over the counter at all banks. The limit for such exchange was □ 4,000per person from 8 to 13 November, was increased to □ 4,500from 14 to 17 November, and reduced to □ 2,000from 18 to 25 November. The exchange of banknotes was stopped completely on 25 November, although the government had previously stated that the volume of exchange would be increased after that date. International airports also facilitated an exchange of banknotes for foreign tourists and out-bound travelers, amounting to a total value of □ 5,000per person. Fuel pumps, government hospitals, railway and airline booking counters, state-government recognised dairies and ration stores, and crematoriums were allowed to accept the demonetised banknotes until 2

December 2016.

Cash withdrawals from bank accounts were restricted to ₹ 10,000 per day and ₹ 20,000per week per account from 10 to 13 November.This limit was increased to ₹ 24,000per week from 14 November 2016.Limits on cash withdrawals from Current accounts/ Cash credit accounts/ Overdraft accounts were withdrawn later. RBI increased the withdrawal limit from Savings Bank account to ₹ 50,000from the earlier ₹ 24,000on 20 February 2017 and then on 13 March 2017, it removed all withdrawal limits from savings bank accounts.

A daily limit on withdrawals from ATMs was also imposed varying from ₹ 2,000per day until 14 November, and ₹ 2,500 per day until 31 December.This limit was increased to ₹ 4,500per day from 1 January,and again to ₹ 10,000from 16 January 2017. From 17 November, families were allowed to withdraw ₹ 250,000for wedding expenses. Farmers were permitted to withdraw ₹ 25,000 per week against crop loans.

Ordinance and Act

The Specified Bank Notes (Cessation of Liabilities) Ordinance, 2016 was issued on 28 December 2016, ending the liability of the government for the demonetised banknotes. The ordinance also imposed fines on people found carrying out transactions with them after 8 November 2016, or holding more than ten of them after 30 December 2016. It provided for the exchange of the banknotes after 30 December for people who had been outside India between 9 November and 30 December.The Specified Bank Notes (Cessation of Liabilities) Act, 2017 was notified on 1 March 2017, replacing the ordinance.

OBJECTIVES AND OUTCOMES

The government said that the main objective of the exercise was curbing black money which included income which had not been reported and thus was untaxed; money gained through corruption, illegal goods sales and illegal activities such as human trafficking; and counterfeit currency. Other stated objectives included expanding the tax base and increasing the number of taxpayers; reducing the number of transactions carried out by cash; reducing the finances available to terrorists and radical groups such as Maoists and Naxalites; and integrating the formal and informal economies.

Black money

The government estimated that ₹ 3 lakh crore, or approximately 20%, of the demonetised banknotes would be permanently removed from circulation. However, according to a 2018 report from the RBI, approximately 99.3% of the demonetised banknotes, or ₹ 15.30 lakh crore of the ₹ 15.41 lakh crorethat had been demonetised, were deposited with the banking system. The banknotes that were not deposited were only worth ₹ 10,720 crore.Commentators concluded that the government failed in its aim of purging black money from the economy.

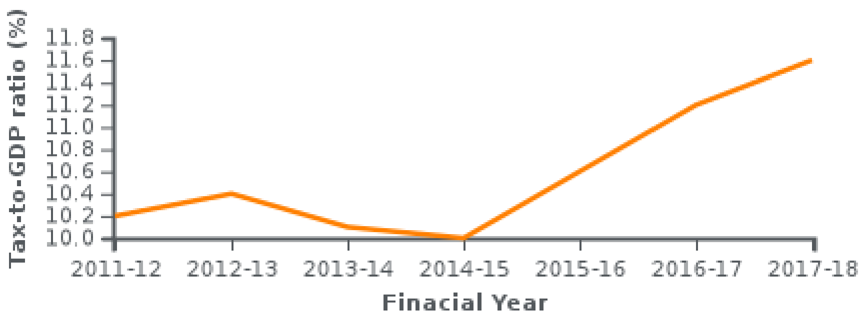
Counterfeit banknotes

Number of counterfeit banknotes detected in banks (April - March)

Denomination	2015-16	2016-17	2017-18
₹ 1	2	3	4
₹ 2 and ₹ 5	2	80	1
₹ 10	134	523	287
₹ 20	96	324	437
₹ 50	6,453	9,222	23,447
₹ 100	2,21,447	1,77,195	2,39,182
₹ 200	NA	NA	79
₹ 500 (old)	2,61,695	3,17,567	1,27,918
₹ 500 (new)	NA	199	9,892
₹ 1000	1,43,099	2,56,324	1,03,611
₹ 2000	NA	638	17,929
Total	6,32,926	7,62,027	5,22,783

After demonetisation, there was an increase in the number of counterfeit ₹ 100and ₹ 50 banknotes. The number of counterfeit ₹ 500and ₹ 1,000(demonetised version) banknotes saw an increase in 2016-17 and subsequently a decline in 2017-18. But in 2017-18, there was an increase in counterfeit ₹ 500and ₹ 2,000(new version) banknotes than the previous year.There has been no significant change in the number of counterfeit banknotes detected. In 2017-18, the number of detected counterfeit banknotes was close to the number before demonetisation. Additionally, after demonetisation, only 0.0035% of the ₹ 1,000banknotes were found to be counterfeit.

Tax collection



The number of income tax returns filing increased from 43.3 million to 52.9 million between financial year 2016 and 2017 which was not a significant increase compared to increase between 2015 and 2016. The tax compliance had increased with number of income tax returns filing increased but majority of them were from salaried and non-business class. The income tax collections increased in financial year 2017 due to Income Disclosure Scheme 2016. If adjusted for it, the increase in tax collection was modest.

The tax-to-GDP ratio has increased due to expanding tax base.

Digital payments

The push for the digital payments was one of the stated intention of the demonetisation. There was immediate and sharp jump in the digital payments in November–December 2016 owing to shortage of cash. The debit card point of sale transactions was twice the size of value suggested by trend before the demonetisation. The value of credit card increased but no sharp growth was seen. The mobile wallet transactions picked up immediately after the demonetisation followed by dip in mid-2017 due to easing cash shortage. There was again sharp rise thereafter. By April 2018, the volume of the digital payments had doubled.

Banknotes in circulation

On 28 October 2016 the total banknotes in circulation in India were valued at □ 17.77 lakh crore(US$260 billion); what proportion of this derived from □ 500and □ 1,000banknotes was unknown. In its annual report of March 2016, the Reserve Bank of India (RBI) stated that total banknotes in circulation valued □ 16.42 lakh crore(US$240 billion) of which nearly 86% (around □ 14.18 lakh crore(US$210 billion)) derived from □ 500and □ 1,000banknotes. In terms of volume, the report stated that 24% (around 22.03 billion) of the total 9026.6 crore (90.26 billion) banknotes in circulation were □ 500and □ 1,000banknotes.

Terrorism and internal security

Initially there was a decrease in the activities and attacks by Maoist and Naxalite radical groups which was attributed to lack of finance following demonetisation. The surrender rate had reached its highest. The activities returned within few months. There was a decrease in the terror activities in Jammu and Kashmir.

Other effects

Cash shortage

The scarcity of cash due to demonetisation led to chaos, and people faced difficulties in depositing or exchanging the demonetised banknotes due to long queues outside banks and ATMs across India. The ATMs were short of cash for months after demonetisation

During the demonetisation, the unaccounted money worth □ 610 crore were seized by the police and tax officials across India which included □ 110 crorein new banknotes.[105] Reports in the media noted that although the general public faced a severe cash shortage, some individuals were able to amass crores in new banknotes; they thus described the demonetisation exercise as being futile.

Transportation

The All India Motor Transport Congress claimed that about 800,000 truck drivers and conductors were affected with shortage of cash, with around 400,000 trucks stranded at major highways across India.While major highway toll junctions on the Gujarat and Delhi-Mumbai highways also saw long queues as toll plaza operators refused the demonetisedbanknotes.The Ministry of Road Transport and Highways subsequently announced a suspension of toll collections on all

national highways across the country until 2 December as well as acceptance of demonetised □ 500banknote as a toll from 2 to 15 December.

Stock market

As a combined effect of demonetisation and US presidential election, the stock market indices dropped to an around six-month low in the week following the announcement. The day after the demonetisation announcement, BSE SENSEX crashed nearly 1,689 points and NIFTY 50 plunged by over 541 points. By the end of the intraday trading section on 15 November 2016, the BSE SENSEX index was lower by 565 points and the NIFTY 50 index was below 8100 intraday. There was a marginal effects on stock market during November–December 2016.

Industrial output

There was a reduction in industrial output as industries were hit by the cash shortage.[116] The Purchasing Managers' Index (PMI) fell to 46.7 in November 2016 from 54.5 in October 2016, recording its sharpest reduction in three years.A reading above 50 indicates growth and a reading below shows contraction. This indicates a slowdown in both, manufacturing and services industries.The PMI report also showed that the reduction in inflation in November 2016 was due to shortage in money supply.

The growth in eight core sectors such as cement, steel and refinery products, which constitute 38% of the Index of industrial production (IIP), was only to 4.9 percent in November 2016 as compared with 6.6 percent a month ago.

Agriculture

Transactions in the agriculture sector are heavily dependent on cash and were adversely affected by the demonetisation. Due to scarcity of the new banknotes, many farmers have insufficient cash to purchase seeds, fertilisers and pesticides needed for the plantation of rabi crops usually sown around mid-November.The shortage of cash led to plunge in demand which in turn led to a crash in the prices of crops. Farmers were unable to recover even the costs of transportation from their fields to the market from the low prices offered.Demonetisation resulted in the relative erosion of agricultural wages and weak bargaining power of farmers for their produce.

GDP started to recover from Q2'17-18 and clocked 8.2% in Q2'18-19.

Employment

There was a loss of jobs and decline in wages due to demonetisation, particularly in the unorganised and informal sector and in small enterprises.Migrant workers were adversely affected by demonetisation. There was

According to the report prepared by Centre for Monitoring Indian Economy (CMIE), the number of employed people was 401 million in January–April 2016, 403 million during May–August 2016, 406.5 million in September–December 2016. After demonetisation in November 2016, the number fell to 405 million in January–April 2017. So there was fall of 1.5 million in number of people employed.[147] CMIE also reported that the number of persons employed was 406.7 million in 2016-17 which fell by 0.1% to 406.2 million in 2017-18. So the employment had stagnated which resulted in employment rate decline. The employment rate fell from 42.59% in 2016-17 to 41.45% in 2016-17. The unemployment rate also declined

from 7.51% in 2016-17 to 4.66% in 2017-18 because of the shrinking employed force. The number of employed force fell from 439.7 million in 2016-17 to 426.1 million in 2017-18.

Cost to banks

Before demonetisation, the RBI had spent 3,421 croreto print banknotes in 2015-2016 (July to June). The cost of printing new banknotes escalated to 7,965 crorein 2016-17 and 4,912 crorein 2017-18. This resulted in a decline in the dividend paid to the government from 65,876 crore in 2015-16 to 30,659 crorein 2016-17 and 50,000 crorein 2017-18. It was estimated that this decrease in income for the government could cause the fiscal deficit for the financial year 2016-17 to increase from the targeted 3.2% to 3.4%. The Indian Air Force was paid 29.41 croreto move banknotes after demonetisation.The banks incurred the cost in collection, storage and movement of banknotes across the country as well as in re-calibrating the ATMs.

Welfare schemes

Demonetisation negatively impacted the Midday Meal Scheme due to shortage of funds.

Legal issues

A public interest litigation (PIL) was filed in Madras High Court by M. SeeniAhamed, General Secretary of the Indian National League, to scrap the decision of demonetisation. The High Court dismissed the PIL stating that it could not interfere in monetary policies of the government.Similar PILs were also filed in the Supreme Court of India.In November 2017, the Supreme Court of India referred all cases related to demonetisation to constitutional bench to review the legality of the demonetisation, implementation irregularities and violation of people's rights by limits on cash withdrawals.

The government had initially announced that any person who is unable to deposit the demonetised banknotes by 31 December 2016 would be given an opportunity to do so until a later date. However, the government allowed only Non-Resident Indians (NRIs) to deposit demonetised banknotes after 31 December 2016.As a result, many people were left stranded with demonetised banknotes. People petitioned the courts to allow deposit of the demonetised banknotes. In November 2017 the Supreme Court dismissed 14 petitions related to demonetization, and asked petitioners to file pleas with a constitutional bench which would deal with cases related to demonetisation.

14.2.Check your progress Questions.

Check your Progress-1

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What about the demonetization?

Check your Progress-2

Note: a).Write your answer in the space given below

b)Compare your answer with those given at the end of the unit.

i) What are the demoniterization effects on stock market?

14.3.Answer to check your progress Questions.

1. On 8 November 2016, the Government of India announced the demonetization of all □500 and □ 1,000banknotes of the Mahatma Gandhi Series. It also announced the issuance of new □ 500and □ 2,000banknotes in exchange for the demonetised banknotes.[1] The Prime minister of India NarendraModi claimed that the action would curtail the shadow economy and reduce the use of illicit and counterfeit cash to fund illegal activity and terrorism.

2. As a combined effect of demonetisation and US presidential election, the stock market indices dropped to an around six-month low in the week following the announcement. The day after the demonetisation announcement, BSE SENSEX crashed nearly 1,689 points and NIFTY 50 plunged by over 541 points. By the end of the intraday trading section on 15 November 2016, the BSE SENSEX index was lower by 565 points and the NIFTY 50 index was below 8100 intraday. There was a marginal effects on stock market during November–December 2016.

14.4.Summary

In this unit, you have learnt about the meanings of Demoniterization and its implementation . This knowledge would make you understand what is demoniterization and how it can be worked at a monetary system. The concept such as demoniterization and higher order money in 2016 and you might have learnt about the meaning and its functions in the India.

14.5.Key words

Demoniterization, Transportation

14.6.Self Assessment Questions and Exercises.

Short Answer Questions

1. What about the demonetization?
2. What are the demoniterization effects on stock market?

Long answer Questions.

1.Explain Recent Reforms in Monetary systems in India: Demonetisation of Higher order Money in 2016 and its implications.

2.Detail the 1.Explain Recent Reforms in Monetary systems in India: Demonetisation of Higher order Money in 2016 and its implications.

14.7.Further Readings

Wikipedia

DISTANCE EDUCATION -CBCE-(2018-19 Academic year Onwards)

Question Paper Pattern (ESE)-Theory

(UG/PG/P.G. Diploma Programmes)

Time: 3 Hours Maximum : 75 marks

Part-A (10x2=20Marks)
Answer all questions

1. Define Money.
2. What is capitalist economy?
3. What means Monetary Equilibrium?
4. Define Demand Function.
5. What is financial intermediary?
6. What is real balance effect?
7. Define inflation?
8. What are the IMF Activities?
9. What are the functions of NABARD ?
10 .Write about the demoniterization.

Part-B (5x5=25Marks)
Answer all questions choosing either (a) or (b)

11. a. Explain the defects of the barter system?
(or)
b. Explain Capitalist and Socialist Economy.

12. a. Difference between classical and Keynesian modules of economy?
(or)
b. Baumol's Approach to Transaction Demand for Money?
(or)

13. a. State Friedman's Restatement of Quantity Theory of Money
(or)
b. Detail the Financial Intermediaries and the Supply of Money

14. a. Detail Non-Banking Financial Intermediaries.
(or)
b. Explain the Patinkin System and the Neutrality of Money

15. a. State Monetary Policy, Different types and Tools of Monetary Controls and Monetary Reforms in India (since 1991).
(or)
b. Detail the 1.Explain Recent Reforms in Monetary systems in India: Demonetisation of Higher order Money in 2016 and its implications.

Part-C (3x10=30Marks)
(Answer any 3 out of 5 questions)

16. Explain the classical modules of money
17. Describe the Explain Mixed Economies
18. Explain the Detail the World Bank and ADB
19. Explain the Indian Monetary Systems RBI and NABARD
20. Explain Raguram Rajan's Committee Report on Monetary Reforms.